



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**RBD412-729-041**  
**Job Sheet 171423**



**Part No:** RBD412-729-041

**Job Qty:** 1 ea

**Part Name:** Ground Handling Wheels Fits LH or RH (Hydraulic)



**Part Weight:** 0 lbs

**Status:** Scheduled

**Priority:** Medium

**Job Created:** 2/1/18

**Job Tracking No:**

**Due Date:** 2/1/18

**Created By:** Linda Lacelle

**Type:** Stock

**Description:**

**Note:** DWG RBD3233-041 REV 2 , RBD3330-041 REV 2 , RBD412-729-011 REV 2 IPP Rev.A 17.07.03 New issue  
DP Verify DD

**Ship Via:**

### Bill of Materials

### Job Routing

| Op No | Operation  | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off     |
|-------|------------|-------|------------|----------|-----------|---------|-----------------------|-----------|--------------|
|       |            |       |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |              |
| 100   | Purchasing | 1 pcs |            | 1/31/18  | 0.00      | 0.00    | Purchasing            |           | AT 18/02/01  |
| 120   | Packaging  | 1 pcs |            | 1/31/18  | 0.00      | 0.00    | Packaging2            |           | DAS 18/02/01 |
| 130   | QC         | 1 pcs |            | 1/31/18  | 0.00      | 0.00    | QC6                   |           | 38           |
| 131   | Small Fab  | 1 pcs |            | 2/1/18   | 0.00      | 1.00    | Small Fab-3           |           | 9-88 DAS     |
| 132   | QC         | 1 pcs |            | 2/1/18   | 0.00      | 0.00    | QC5                   |           | 38           |
| 140   | Packaging  | 1 pcs |            | 2/1/18   | 0.00      | 0.00    | Packaging3-1          |           | 9-88         |
| 150   | QC21-SA    | 1 Ea  |            | 2/1/18   | 0.00      | 0.00    | QC21                  |           | 9-88         |

Part Op 100 - Issue P/O to Metec : 36956. Machine as per dwg RBD412-729-041 C of C is required  
Descriptions: 131 - 1-Transfer drill placard debur holes. 2-Engrave placard using Marktronic 3-Rivet placard 4-Install labels

CY 18/02/01 x 1

FEB 07 2018

PK002

### Job BOM

| Part / Item     | Component Name                                   | Quantity     | Operation      | Container |
|-----------------|--------------------------------------------------|--------------|----------------|-----------|
| RBD412-729-041P | Ground Handling Wheels Fits LH or RH (Hydraulic) | 1 pcs (1 ea) | 100-Purchasing | 5038047   |
| MS20600-AD4W3   | Cherry Rivet                                     | 8 Ea (8 ea)  | 131-Small Fab  |           |
| RB41011         | Dart Tooling Placard, Aluminum                   | 2 Ea (2 ea)  | 131-Small Fab  |           |
| RBD3309-1       | Label, Remove Before Flight                      | 2 Ea (2 ea)  | 131-Small Fab  |           |
| RBD3309-3       | Label, Grease Slides                             | 2 Ea (2 ea)  | 131-Small Fab  |           |

### Job Allocations

| Operation      | Component Part        | Required | Inventory | Allocated |
|----------------|-----------------------|----------|-----------|-----------|
| 100-Purchasing | RBD412-729-041P       | 1        | 0         | 0         |
| 131-Small Fab  | MS20600-AD4W3 5019431 | 8        | 179       | 0         |
|                | RB41011 504040        | 2        | 953       | 0         |
|                | RBD3309-1             | 2        | 10        | 0         |
|                | RBD3309-3             | 2        | 10        | 0         |

### Part Specifications

Specifications could not be found.

**DART**  
AEROSPACE  
**S038135**



Ground Handling Wheels Fits LH or RH (Hydraulic)

**PART NO:** RBD412-729-041  
**Original Serial #:** S038135  
**Revision:**  
**Operation:**  
**Change No:**

**Purchasing**

**Mfg Date:** 02/01/18  
**Job No:** 171423

**Dart Aerospace Ltd.**  
1270 Aberdeen Street  
Hawkesbury, ON K64 1K7  
CANADA  
TEL.: 1 613 632-5200  
Email: sales@dartaero.com  
www.dartaerospace.com

**Work Order ID 163762**

Friday, July 07, 2017 8:25:05 AM

**\*163762\***

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Item ID: RBD412-729-041

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Ground Handling Wheels Fits LH or RH (Hydraulic)

Start Date: 7/7/2017 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 8/21/2017 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: **DAS 13 9-89** Date: **JUL 07 2017**

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
|----------|--------------|

|             |   |
|-------------|---|
| RBD3233-041 | 2 |
|-------------|---|

|             |   |
|-------------|---|
| RBD3330-041 | 2 |
|-------------|---|

|                |   |
|----------------|---|
| RBD412-729-011 | 2 |
|----------------|---|

110

Outsource process - Machining

0.00

**\*110\***

HAAS CNC VERTICAL MACHINING #1

Outsource5

Memo

336.00

Outsource process - Machining

Issue P/O to Metec : **36956**  
Machine as per dwg RBD412-729-041  
C of C is required**1****JUL 07 2017****DAS 13 9-89****DOB 17/07/07**

120

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

**\*120\***

Packaging

Memo

0.02

Packaging

Ensure C of C is attach



DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |                       |                                                                                                                    |  |
|--------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|-----------------------|--------------------------------------------------------------------------------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                               |  |                       |                                                                                                                    |  |
| Date :                                                       |                                                | Step #:                                                                                                                                                                            |                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  | MRB (QSI042) Approval |                                                                                                                    |  |
| Description Work Order Deviation                             |                                                |                                                                                                                                                                                    |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |  |                       | Completed By<br><br><br>Lead hand / Supervisor<br>Approval Verification<br><br><br>QC / QA Coordinator<br>Approval |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |                       |                                                                                                                    |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |                       |                                                                                                                    |  |
| Root Cause                                                   |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |                       |                                                                                                                    |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Positioned Wrong <input type="checkbox"/>     |  |                       |                                                                                                                    |  |
| Design <input type="checkbox"/>                              | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Outside Dimensions <input type="checkbox"/>   |  |                       |                                                                                                                    |  |
| Doc/Data <input type="checkbox"/>                            | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Over/Under tolerance <input type="checkbox"/> |  |                       |                                                                                                                    |  |
| Equip/Tooling <input type="checkbox"/>                       | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Part Incorrect <input type="checkbox"/>       |  |                       |                                                                                                                    |  |
| Handling/Pre <input type="checkbox"/>                        | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Lost/Missing <input type="checkbox"/>    |  |                       |                                                                                                                    |  |
| Material <input type="checkbox"/>                            | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Part Moved <input type="checkbox"/>           |  |                       |                                                                                                                    |  |
| Internal Transport <input type="checkbox"/>                  | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Drawing <input type="checkbox"/>              |  |                       |                                                                                                                    |  |
| Tribal Knowledge <input type="checkbox"/>                    | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Finish <input type="checkbox"/>               |  |                       |                                                                                                                    |  |
| LOA <input type="checkbox"/>                                 | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Misread <input type="checkbox"/>              |  |                       |                                                                                                                    |  |
| Substation <input type="checkbox"/>                          | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Turning Sequence <input type="checkbox"/>     |  |                       |                                                                                                                    |  |
| Past Expiry Date <input type="checkbox"/>                    | Manufacturing Process <input type="checkbox"/> |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |                       |                                                                                                                    |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>              | OTHER : <input type="checkbox"/>                                                                                                                                                   |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                               |  |                       |                                                                                                                    |  |



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### Quality Control

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |                 |  |
|--------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------|---------------------------------------------|-----------------------------------|---------------------------------------|------------------------------------------------|------------------------------------|--------------------------------|-----------------------------------------------|----------------------------------------|-----------------------------------|---------------------------------|-----------------------------------------------|-------------------------------|-----------------------------------------|---------------------------------------|-----------------------------------|-------------------------------------------------|------------------------------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------|------------------------------------------|--------------------------------|----------------------------------------|------------------------------------------|-------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------------|--------------------------------------|----------------------------------|----------------------------------|-------------------------------------------|----------------------------------|-------------------------------------|----------------------------------------|-------------------------------------|---------------------------------|------------------------------|----------------------------------------------|---------------------------------------------|----------------------------------------------------------|---------------------------------------|----------------------------------|-------------------------------------|----------------------------------------------|----------------------------------------|--------------------------------------|------------------------------------------------|-------------------------------------------|-------------------------------------------|------------------------------------------------|-----------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                             | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                           | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |                 |  |
| Date :                                                       |                                             | Step #:                                                                                                                                                                            |                                           | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 | MRB (QSI042) Approval             |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |                 |  |
| Description Work Order Deviation                             |                                             |                                                                                                                                                                                    |                                           | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |                                 |                                   | Completed By<br><br><br>Lead hand / Supervisor<br>Approval Verification<br><br><br>QC / QA Coordinator<br>Approval |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |                 |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |                 |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |                 |  |
| Root Cause                                                   |                                             | FAULT CATEGORY                                                                                                                                                                     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |                 |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Positioned Wrong <input type="checkbox"/> | Design <input type="checkbox"/> | Operator <input type="checkbox"/> | Bending <input type="checkbox"/>                                                                                   | Set-up <input type="checkbox"/> | Folio/Program <input type="checkbox"/> | Outside Dimensions <input type="checkbox"/> | Doc/Data <input type="checkbox"/> | Offset/Setup <input type="checkbox"/> | Centre Not Concentric <input type="checkbox"/> | BOM/Route <input type="checkbox"/> | Grain <input type="checkbox"/> | Over/Under tolerance <input type="checkbox"/> | Equip/Tooling <input type="checkbox"/> | Supplier <input type="checkbox"/> | Cracks <input type="checkbox"/> | Broken/Damage/Defect <input type="checkbox"/> | Weld <input type="checkbox"/> | Part Incorrect <input type="checkbox"/> | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/> | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/> | Part Lost/Missing <input type="checkbox"/> | Material <input type="checkbox"/> | Use for Testing <input type="checkbox"/> | Cuffs <input type="checkbox"/> | Contamination <input type="checkbox"/> | Out of Sequence <input type="checkbox"/> | Part Moved <input type="checkbox"/> | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Crushing <input type="checkbox"/> | Countersink <input type="checkbox"/> | Off-set <input type="checkbox"/> | Drawing <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/> | Rushing <input type="checkbox"/> | Heat Treat <input type="checkbox"/> | Cut Too Short <input type="checkbox"/> | Mislabeled <input type="checkbox"/> | Finish <input type="checkbox"/> | LOA <input type="checkbox"/> | Product Improvement <input type="checkbox"/> | Wave/Twist in Tube <input type="checkbox"/> | Instructions Incomplete/Unclear <input type="checkbox"/> | Fit/Function <input type="checkbox"/> | Misread <input type="checkbox"/> | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> | Marks/Chatter <input type="checkbox"/> | Drill Holes <input type="checkbox"/> | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> | OTHER :<br><br> |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>           |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |                 |  |

Friday, July 07, 2017 8:25:04 AM

**\*163762\***

**Parent Item:** RBD412-729-041

**\*RBD412-729-041\***

**Parent Item Name:** Ground Handling Wheels Fits LH or RH (Hydraulic)

**Start Date:** 7/7/2017

**Required Date:** 8/21/2017

**Start Qty: 1.00**

**Required Qty: 1.00**

**Comments:** IPP Rev.A 17-07-03 New issue DP Verify DD

| Component Item ID/<br>Item Name                  | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|--------------------------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| RBD412-729-041P                                  |                        | Purchased     | N           |                     |                  | 110             | Each               | 0.0000         | 1           | 1            |               |                |        |
| <b>*RBD412-729-041P*</b>                         |                        |               |             |                     |                  |                 |                    |                | <b>**</b>   |              |               |                |        |
| Ground Handling Wheels Fits LH or RH (Hydraulic) |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |



DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

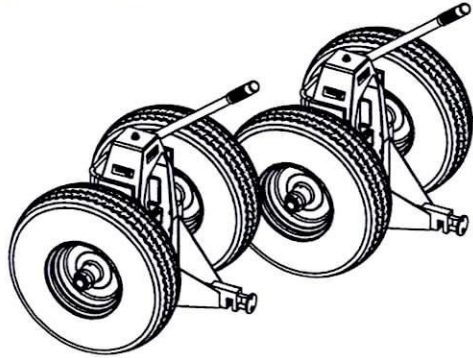
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |         |  |
|--------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------|---------------------------------------------|-----------------------------------|---------------------------------------|------------------------------------------------|------------------------------------|--------------------------------|-----------------------------------------------|----------------------------------------|-----------------------------------|---------------------------------|-----------------------------------------------|-------------------------------|-----------------------------------------|---------------------------------------|-----------------------------------|-------------------------------------------------|------------------------------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------|------------------------------------------|--------------------------------|----------------------------------------|------------------------------------------|-------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------------|--------------------------------------|----------------------------------|----------------------------------|-------------------------------------------|----------------------------------|-------------------------------------|----------------------------------------|-------------------------------------|---------------------------------|------------------------------|----------------------------------------------|---------------------------------------------|----------------------------------------------------------|---------------------------------------|----------------------------------|-------------------------------------|----------------------------------------------|----------------------------------------|--------------------------------------|------------------------------------------------|-------------------------------------------|-------------------------------------------|------------------------------------------------|---------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                             | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                           | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |         |  |
| Date :                                                       |                                             | Step #:                                                                                                                                                                            |                                           | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   | MRB (QSI042) Approval                                                                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |         |  |
| Description Work Order Deviation                             |                                             |                                                                                                                                                                                    |                                           | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                           |                                 |                                   | Completed By<br><br><br>Lead hand / Supervisor<br>Approval Verification<br><br><br>QC / QA Coordinator<br>Approval |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |         |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |         |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |         |  |
| Root Cause                                                   |                                             | FAULT CATEGORY                                                                                                                                                                     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |         |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Positioned Wrong <input type="checkbox"/> | Design <input type="checkbox"/> | Operator <input type="checkbox"/> | Bending <input type="checkbox"/>                                                                                   | Set-up <input type="checkbox"/> | Folio/Program <input type="checkbox"/> | Outside Dimensions <input type="checkbox"/> | Doc/Data <input type="checkbox"/> | Offset/Setup <input type="checkbox"/> | Centre Not Concentric <input type="checkbox"/> | BOM/Route <input type="checkbox"/> | Grain <input type="checkbox"/> | Over/Under tolerance <input type="checkbox"/> | Equip/Tooling <input type="checkbox"/> | Supplier <input type="checkbox"/> | Cracks <input type="checkbox"/> | Broken/Damage/Defect <input type="checkbox"/> | Weld <input type="checkbox"/> | Part Incorrect <input type="checkbox"/> | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/> | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/> | Part Lost/Missing <input type="checkbox"/> | Material <input type="checkbox"/> | Use for Testing <input type="checkbox"/> | Cuffs <input type="checkbox"/> | Contamination <input type="checkbox"/> | Out of Sequence <input type="checkbox"/> | Part Moved <input type="checkbox"/> | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Crushing <input type="checkbox"/> | Countersink <input type="checkbox"/> | Off-set <input type="checkbox"/> | Drawing <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/> | Rushing <input type="checkbox"/> | Heat Treat <input type="checkbox"/> | Cut Too Short <input type="checkbox"/> | Mislabeled <input type="checkbox"/> | Finish <input type="checkbox"/> | LOA <input type="checkbox"/> | Product Improvement <input type="checkbox"/> | Wave/Twist in Tube <input type="checkbox"/> | Instructions Incomplete/Unclear <input type="checkbox"/> | Fit/Function <input type="checkbox"/> | Misread <input type="checkbox"/> | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> | Marks/Chatter <input type="checkbox"/> | Drill Holes <input type="checkbox"/> | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> | OTHER : |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>           |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                           |                                 |                                   |                                                                                                                    |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |         |  |

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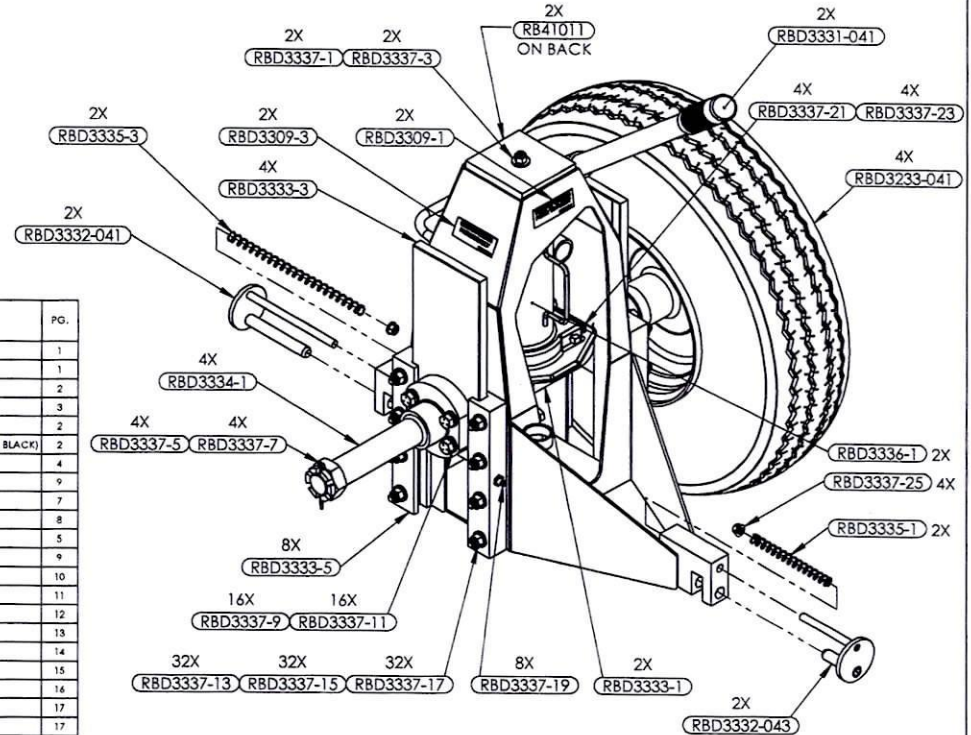
W/O: 163762

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| REV | ECR     | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DATE      | INITIAL | APPROVED |
|-----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------|----------|
| 1   |         | -1 DIM CHD WAS 21.000 IS 21.00 -5 CHD DO. WAS 0.332 IS .344.                                                                                                                                                                                                                                                                                                                                                                                                                                     | 6/18/2014 | RJC     | GE       |
| 2   | 16-0039 | UPDATED TO NEW DRAFTING STANDARDS. CHD DWG NUMBER WAS RBD412-729-011 IS RBD412-729-011. RBD3332-7 MOVED TO SEPARATE SHEET. RBD3332-9 MOVED TO SEPARATE SHEET. RBD3333-3 CHD DIM WAS .650 IS .640. WAS 1.200 IS 2X 1.200. RBD3333-6 CHD DIM WAS 0.334 IS 0.344. RBD3334-1 CHD DIM WAS 7.47 IS (7.47). RBD3334-3 CHD B/O WAS 1/4-20 X 01 IS 1/4-20 X 1. RBD3337-13 CHD DIM WAS 1-1/2 G 1-3/4. RBD3309-3 MOVED TO SEPARATE SHEET. RBD3335-3 MOVED TO NEW SHEET. CHD PLACARD WAS RBD1011 IS RBD1011. | 2/16/2016 | SM      | JAG      |

| ASSY QTY | ASSY QTY | ASSY QTY | ASSY QTY | B/O | Part #      | UNIT QTY | Description                 | Material                | B/O INFORMATION OR SPECIFICATIONS                                        | PG. |
|----------|----------|----------|----------|-----|-------------|----------|-----------------------------|-------------------------|--------------------------------------------------------------------------|-----|
|          |          |          |          |     | RBD3333-041 | 4        | WHEEL ASSY                  |                         |                                                                          | 1   |
|          |          |          |          |     | RBD3330-041 | 2        | FRAME WELDMENT              |                         |                                                                          | 1   |
|          |          | X        |          |     | RBD3331-041 | 2        | HANDLE ASSY                 |                         |                                                                          | 2   |
|          |          | 1        |          |     | RBD3331-1   | 1        | HANDLE                      | DOM                     |                                                                          | 3   |
|          |          | 1        |          | B/O | RBD3331-3   | 1        | DOWEL PIN                   | STEEL                   | 03/16 X 1 (MCMASTER-CARR # 9881A510)                                     | 2   |
|          |          | 1        |          | B/O | RBD3331-5   | 1        | GRP                         | NYLON                   | FITS 7/8 IN OD TUBING X 4-3/4 IN LONG (MCMASTER-CARR # 97045K491, BLACK) | 2   |
|          |          | X        |          |     | RBD3332-041 | 2        | PIN ASSEMBLY                |                         |                                                                          | 4   |
|          | 1        | 1        |          |     | RBD3332-1   |          | HANDLE                      | 1018/1020 CR            |                                                                          | 9   |
|          | 1        |          |          |     | RBD3332-3   |          | PIN                         | 1018/1020 CR            |                                                                          | 7   |
|          | 1        |          |          |     | RBD3332-5   |          | SHAFT                       | 1018/1020 CR            |                                                                          | 8   |
|          | X        |          |          |     | RBD3332-043 | 2        | PIN ASSEMBLY                |                         |                                                                          | 5   |
|          | 1        |          |          |     | RBD3332-7   |          | PIN                         | 1018/1020 CR            |                                                                          | 9   |
|          | 1        |          |          |     | RBD3332-9   |          | SHAFT                       | 1018/1020 CR            |                                                                          | 10  |
|          |          |          |          |     | RBD3333-1   | 2        | BASE PLATE                  | 4140/4142               |                                                                          | 11  |
|          |          |          |          |     | RBD3333-3   | 4        | SLIDING PLATE               | 4140/4142               |                                                                          | 12  |
|          |          |          |          |     | RBD3333-5   | 8        | RAIL                        | 1018/1020 CR            |                                                                          | 13  |
|          |          |          |          |     | RBD3334-1   | 4        | WHEEL SHAFT                 | 4140/4142               |                                                                          | 14  |
|          |          |          |          |     | RBD3335-1   | 2        | SPRING                      | STEEL                   | VICTORY SPRING # D3335 (MODIFIED)                                        | 15  |
|          |          |          |          |     | RBD3335-3   | 2        | SPRING                      | STEEL                   | VICTORY SPRING # D3335 (MODIFIED)                                        | 16  |
|          | X        |          |          |     | RBD3336-1   | 2        | JACK ASSY                   | NORCO #7650R (MODIFIED) |                                                                          | 17  |
|          | 1        |          |          | B/O | RBD3336-3   |          | STUD                        | STEEL                   | 1/4-20 X 1 (MCMASTER-CARR #98750A011)                                    | 17  |
|          |          |          |          | B/O | RBD3337-1   | 2        | NYLOCK NUT                  | STEEL                   | 1/4-20 (MCMASTER-CARR # 95615A120)                                       | 1   |
|          |          |          |          | B/O | RBD3337-3   | 2        | WASHER                      | STEEL                   | 1/4 (MCMASTER-CARR # 91081A129)                                          | 1   |
|          |          |          |          | B/O | RBD3337-5   |          | SLOTTED NUT                 | STEEL                   | 1-1/4 (MCMASTER-CARR # 95030A320)                                        | 1   |
|          |          |          |          | B/O | RBD3337-7   | 4        | COTTER PIN                  | STEEL                   | 01/8 X 2 (MCMASTER-CARR # 9838A200)                                      | 1   |
|          |          |          |          | B/O | RBD3337-9   | 16       | HEX HEAD CAP SCREW          | STEEL                   | 3/8-24 X 1-1/4 (MCMASTER-CARR # 9286A217)                                | 1   |
|          |          |          |          | B/O | RBD3337-11  | 16       | LOCK WASHER                 | STEEL                   | 3/8 (MCMASTER-CARR # 91102A760)                                          | 1   |
|          |          |          |          | B/O | RBD3337-13  | 32       | HEX HEAD CAP SCREW          | STEEL                   | 5/16-18 X 1-3/4 (MCMASTER-CARR # 91090A105)                              | 1   |
|          |          |          |          | B/O | RBD3337-15  | 32       | FLAT WASHER                 | STEEL                   | 5/16 (MCMASTER-CARR # 90136A030)                                         | 1   |
|          |          |          |          | B/O | RBD3337-17  | 32       | NYLOCK NUT                  | STEEL                   | 5/16-18 (MCMASTER-CARR # 95615A160)                                      | 1   |
|          |          |          |          | B/O | RBD3337-19  | 8        | GREASE FITTING              | STEEL                   | 1/8 NPT (MCMASTER-CARR # 1095K65)                                        | 1   |
|          |          |          |          | B/O | RBD3337-21  | 4        | SOCKET HEAD CAP SCREW       | STEEL                   | 1/4-20 X 3/4 (MCMASTER-CARR # 91251A540)                                 | 1   |
|          |          |          |          | B/O | RBD3337-23  | 4        | FLAT WASHER                 | STEEL                   | 1/4 (MCMASTER-CARR # 91090A105)                                          | 1   |
|          |          |          |          | B/O | RBD3337-25  | 4        | NYLOCK NUT                  | STEEL                   | 5/16-24 (MCMASTER-CARR # 97135A225)                                      | 1   |
|          |          |          |          | B/O | RBD3309-1   | 2        | LABEL, REMOVE BEFORE FLIGHT | SIGNS NOW               |                                                                          | 18  |
|          |          |          |          | B/O | RBD3309-3   | 2        | LABEL, GREASE SLIDES        | SIGNS NOW               |                                                                          | 19  |
|          |          |          |          | B/O |             | 2        | DART PLACARD                | ALUMINUM                | RB41011                                                                  | N/S |
|          |          |          |          | B/O |             | 1        | CRATE                       |                         | CRATE (10) 44 X 24 X 24, 5PM-15 CERTIFIED (SPECIALTY CRATE)              | N/S |



- NOTE:
- 1) APPLY RUST INHIBITOR ON ALL PARTS AND AREAS NOT PROTECTED BY PAINT OR GREASE. RUST INHIBITOR POSSIBLE SUPPLIER: ACKLANDS-GRANGER INC., P/N LPSC30316.
  - 2) USED ON BELL MODELS 204, 205, 212, 214, 412, UH1, 222, 230, & AH1.

|                               |                             |
|-------------------------------|-----------------------------|
| <b>DART</b><br>AEROSPACE      |                             |
| <b>GROUND HANDLING WHEELS</b> |                             |
| DWG NO. <b>RBD412-729-011</b> |                             |
| REV <b>2</b>                  |                             |
| MATL:                         | UNLESS OTHERWISE SPECIFIED  |
| FEAT:                         | DIMENSIONS ARE IN INCHES    |
| FINISH:                       | .XXX ± .005 FRACTIONS ± 1/8 |
| SPEC:                         | .XX ± .01 ANGLES ± .5°      |
|                               | .XX ± .1 SURFACES ± .125    |
| DRAWN BY:                     | GILBERT                     |
| CHECKED:                      | CLOUGH                      |
| OPPS APPR:                    | ANDERSON                    |
| QA APPR:                      | LINDSAY                     |
| APPROVED:                     | GILBERT                     |
| SCALE                         | 1:5                         |
| DATE                          | 3/15/2012                   |
| SHEET 1 OF 19                 |                             |



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| REVISIONS |     |             |  |  |      |         |          |
|-----------|-----|-------------|--|--|------|---------|----------|
| REV       | ECR | DESCRIPTION |  |  | DATE | INITIAL | APPROVED |

RBD3331-5

RBD3331-1

RBD3331-3

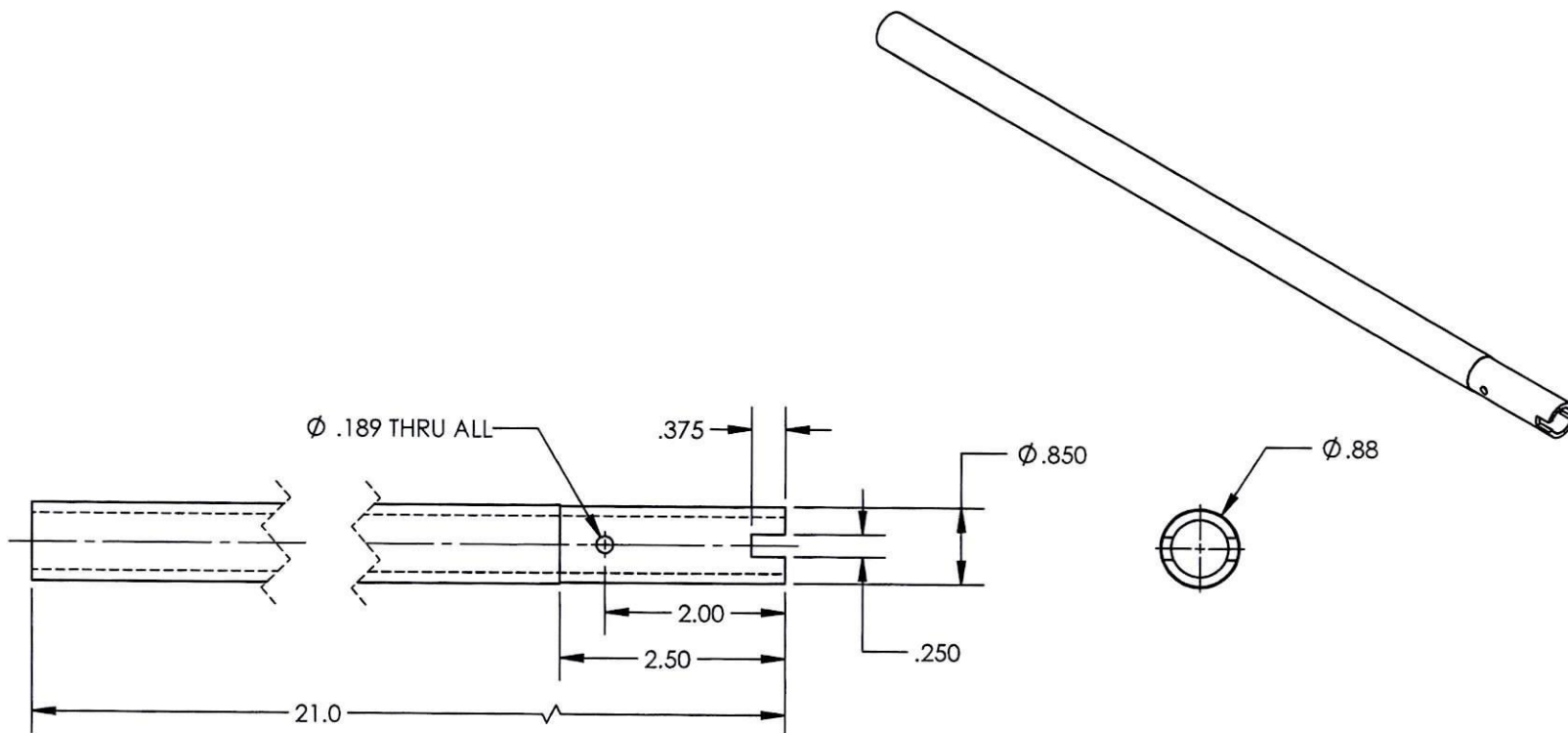
.18

RBD3331-041  
HANDLE ASSY

|                                                                                                  |                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                                                                        |                                                                                                                                                                                                                                                                                                                                       |
| TITLE<br><b>GROUND HANDLING WHEELS</b>                                                           |                                                                                                                                                                                                                                                                                                                                       |
| DWG NO.<br>RBD412-729-011<br>RBD3331-041                                                         | REV<br><b>2</b>                                                                                                                                                                                                                                                                                                                       |
| MAT'L<br>TREAT<br>FINISH<br>SPEC<br>DRAWN BY:<br>CHECKED:<br>OPPS APPR:<br>QA APPR:<br>APPROVED: | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± 5°<br>.X ± .1 SURFACES = 125°<br>1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R<br>2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING<br>3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009<br>USED ON MODEL<br>SEE NOTE 2 SHT 1 |
| GILBERT                                                                                          | GILBERT                                                                                                                                                                                                                                                                                                                               |
| SCALE<br>1:4                                                                                     | DATE<br>3/15/2012                                                                                                                                                                                                                                                                                                                     |
| SHEET 2 OF 19                                                                                    |                                                                                                                                                                                                                                                                                                                                       |

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| REVISIONS |     |                                 |           |         |          |
|-----------|-----|---------------------------------|-----------|---------|----------|
| REV       | ECR | DESCRIPTION                     | DATE      | INITIAL | APPROVED |
| 1         |     | -1 DIM CH'D WAS 21.000 TO 21.0. | 6/18/2014 | RJC     | GE       |



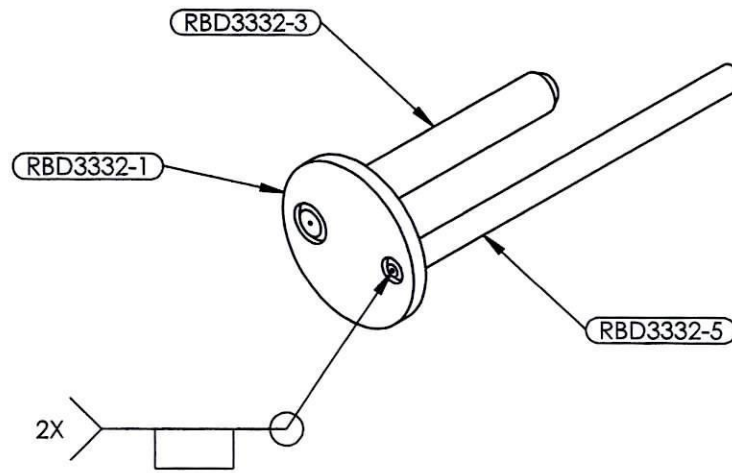
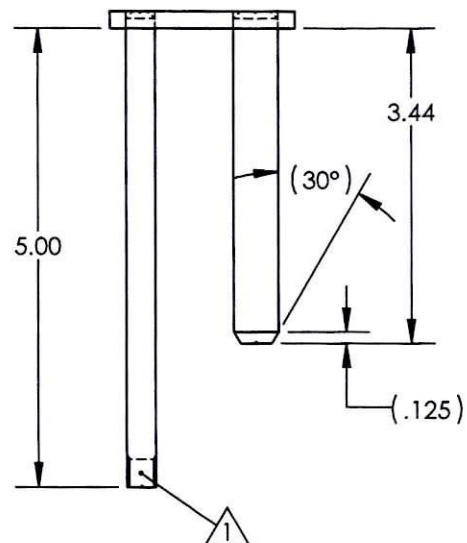
RBD3331-1  
HANDLE

|                                              |                                                                                                                                           |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART</b><br>AEROSPACE                     |                                                                                                                                           |
| TITLE<br><b>GROUND HANDLING WHEEL</b>        |                                                                                                                                           |
| DWG NO.<br>RBD412-729-011<br>RBD3331-1       | REV<br><b>2</b>                                                                                                                           |
| MAT'L DOM<br>HEAT<br>TREAT<br>FINISH<br>SPEC | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± 5°<br>.X ± .1 SURFACES = 125/ |
| DRAWN BY: GILBERT                            | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R                                                                                           |
| CHECKED:                                     | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING                                                                                              |
| OPPS APPR:                                   | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009                                                                                          |
| QA APPR:                                     | USED ON MODEL                                                                                                                             |
| APPROVED: GILBERT                            | SEE NOTE 2 SHT 1                                                                                                                          |
| SCALE 1:2                                    | DATE 3/15/2012 SHEET 3 OF 19                                                                                                              |



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| REVISIONS |     |             |      |          |
|-----------|-----|-------------|------|----------|
| REV       | ECR | DESCRIPTION | DATE | INITIAL  |
|           |     |             |      | APPROVED |



**NOTE:**

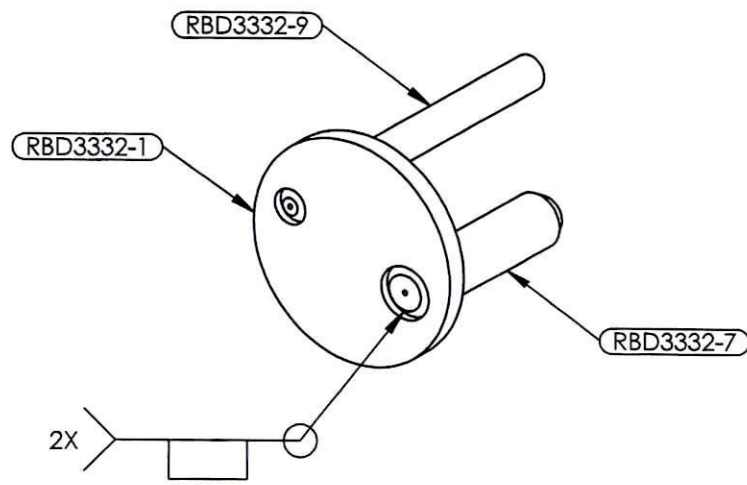
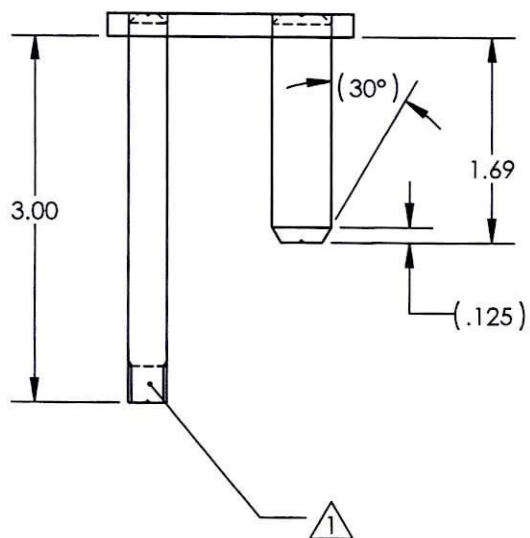
- 1) NO POWDER COAT ON THREADS.
- 2) POSITION PARTS USING D3332-041T1.

RBD3332-041  
PIN ASSEMBLY

|                                          |                                                                                                                                           |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                |                                                                                                                                           |
| TITLE<br><b>GROUND HANDLING WHEEL</b>    |                                                                                                                                           |
| DWG NO.<br>RBD412-729-011<br>RBD3332-041 | REV<br><b>2</b>                                                                                                                           |
| MAT'L<br>HEAT<br>TREAT<br>FINISH<br>SPEC | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± 5°<br>.X ± .1 SURFACES = 125° |
| FED #13538                               | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R                                                                                           |
| DRAWN BY: GILBERT                        | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING                                                                                              |
| CHECKED:                                 | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009                                                                                          |
| OPPS APPR:                               | USED ON MODEL                                                                                                                             |
| QA APPR:                                 | SEE NOTE 2 SHT 1                                                                                                                          |
| APPROVED: GILBERT                        |                                                                                                                                           |
| SCALE 1:2                                | DATE 3/15/2012 SHEET 4 OF 19                                                                                                              |

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| REVISIONS |     |             |                       |
|-----------|-----|-------------|-----------------------|
| REV       | ECR | DESCRIPTION | DATE INITIAL APPROVED |



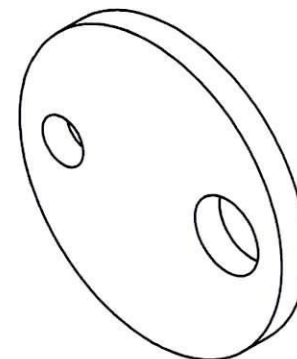
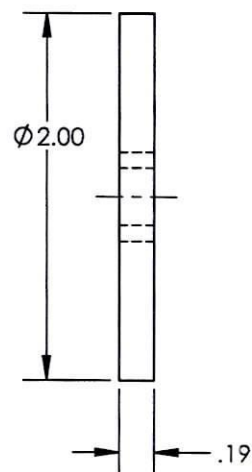
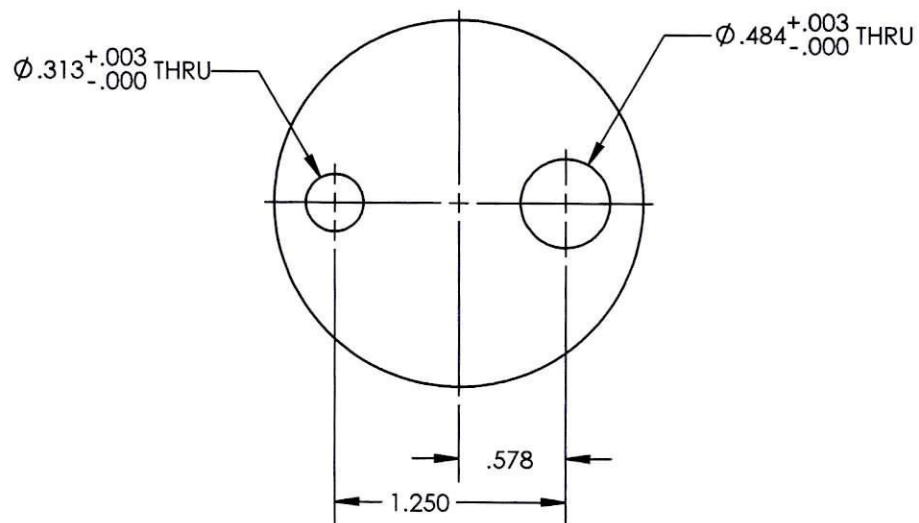
NOTE:  
1) NO POWDER COAT ON THREADS.  
2) POSITION PARTS USING D3332-041T1.

RBD3332-043  
PIN ASSEMBLY

|                                                                                                                                                     |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>DART<br/>AEROSPACE</b>                                                                                                                           |                 |
| TITLE<br><b>GROUND HANDLING WHEEL</b>                                                                                                               |                 |
| DWG NO.<br>RBD412-729-011<br>RBD3332-043                                                                                                            | REV<br><b>2</b> |
| MAT'L<br>HEAT<br>TREAT<br>FINISH POWDER COAT YELLOW<br>SPEC FED #13538                                                                              |                 |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± .5°<br>.X ± .1 SURFACES = 125/✓         |                 |
| 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R<br>2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING<br>3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009 |                 |
| DRAWN BY: GILBERT<br>CHECKED:<br>OPSS APPR:<br>QA APPR:<br>APPROVED: GILBERT<br>SCALE 2:3 DATE 3/15/2012 SHEET 5 OF 19                              |                 |

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|-----------|-----|-------------|----------|
| REV       | ECR | DESCRIPTION | DATE     |
|           |     |             | INITIAL  |
|           |     |             | APPROVED |



RBD3332-1

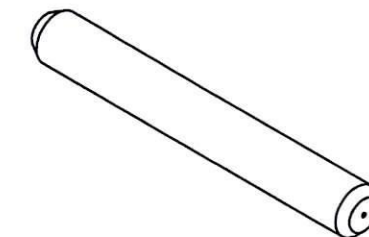
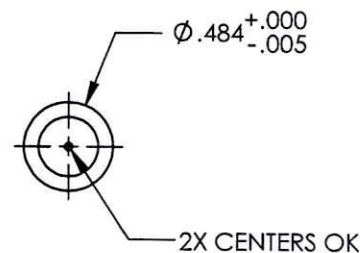
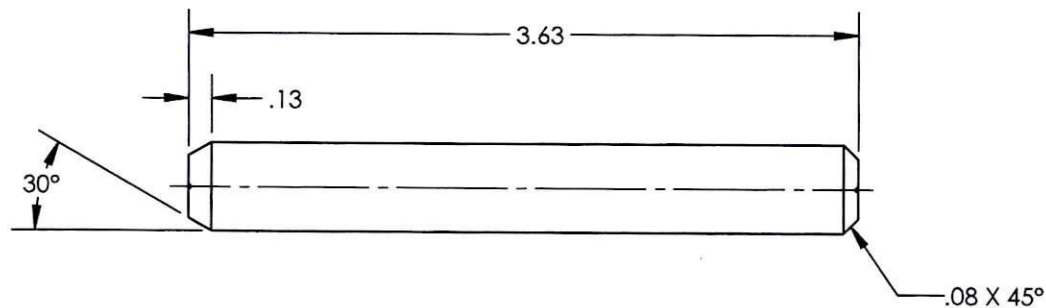
HANDLE

|                                        |                                                  |
|----------------------------------------|--------------------------------------------------|
| <b>DART</b><br>AEROSPACE               |                                                  |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                  |
| DWG NO.<br>RBD412-729-011<br>RBD3332-1 | REV<br><b>2</b>                                  |
| MAT'L 1018/1020 CR                     | UNLESS OTHERWISE SPECIFIED                       |
| HEAT TREAT                             | DIMENSIONS ARE IN INCHES                         |
| FINISH SEE RBD3332-041/RBD3332-043     | .XXX ± .005 FRACTIONS ± 1/8                      |
| SPEC                                   | .XX ± .01 ANGLES ± 5°                            |
|                                        | .X ± .1 SURFACES = 125/                          |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R  |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING     |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009 |
| QA APPR:                               | USED ON MODEL                                    |
| APPROVED: GILBERT                      | SEE NOTE 2 SHT 1                                 |
| SCALE 1:1                              | DATE 3/15/2012                                   |
| SHEET 6 OF 19                          |                                                  |



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| REVISIONS |         |                                    |           |         |          |
|-----------|---------|------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                        | DATE      | INITIAL | APPROVED |
| 2         | 16-0039 | RBD3332-7 MOVED TO SEPERATE SHEET. | 2/16/2016 | SM      | JAG      |



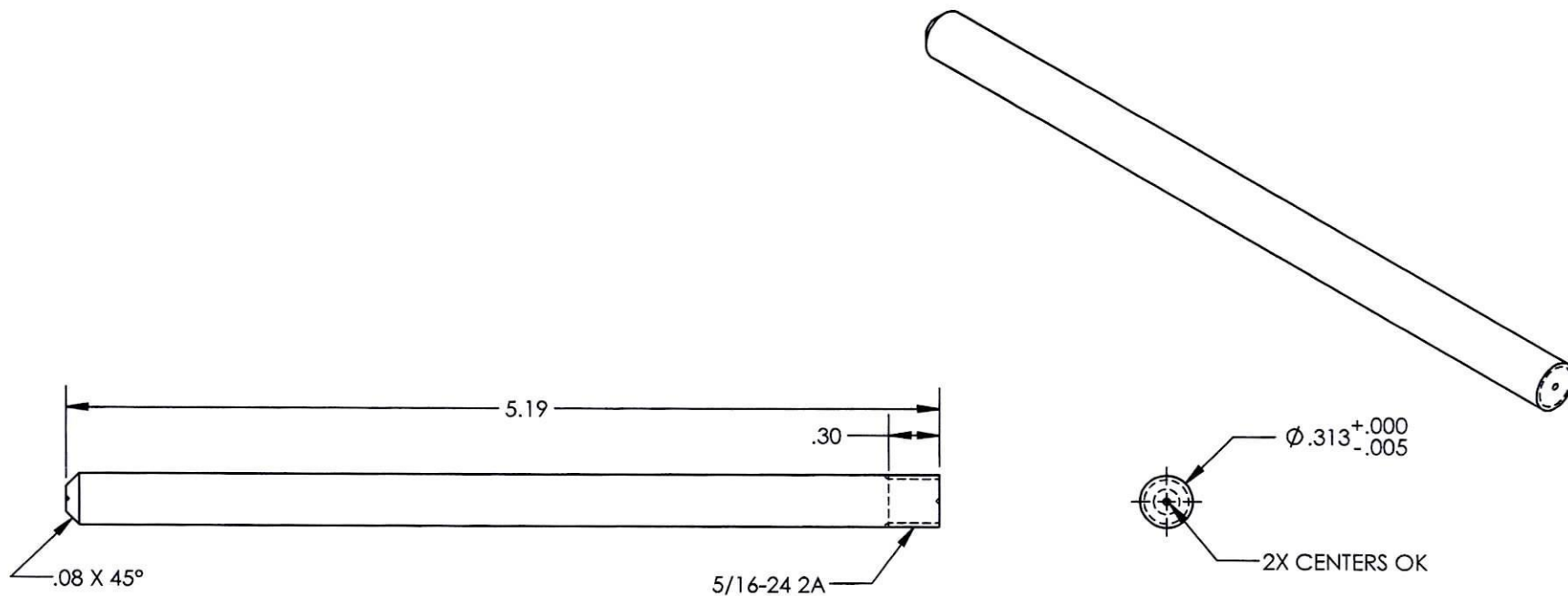
RBD3332-3

PIN

|                                                                                                                                                     |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>DART</b><br>AEROSPACE                                                                                                                            |                              |
| TITLE<br><b>GROUND HANDLING WHEELS</b>                                                                                                              |                              |
| DWG NO.<br>RBD412-729-011<br>RBD3332-3                                                                                                              | REV<br><b>2</b>              |
| MAT'L 1018/1020 CR<br>HEAT TREAT SEE RBD3332-041<br>FINISH<br>SPEC                                                                                  |                              |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± 5°<br>.X ± .1 SURFACES = 125/✓          |                              |
| 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R<br>2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING<br>3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009 |                              |
| DRAWN BY: GILBERT                                                                                                                                   | USED ON MODEL                |
| CHECKED:                                                                                                                                            | SEE NOTE 2 SHT 1             |
| OPPS APPR:                                                                                                                                          |                              |
| QA APPR:                                                                                                                                            |                              |
| APPROVED: GILBERT                                                                                                                                   |                              |
| SCALE 1:1                                                                                                                                           | DATE 3/15/2015 SHEET 7 OF 19 |

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|-----------|---------|------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                        | DATE      | INITIAL | APPROVED |
| 2         | 16-0039 | RBD3332-9 MOVED TO SEPERATE SHEET. | 2/16/2016 | SM      | JAG      |

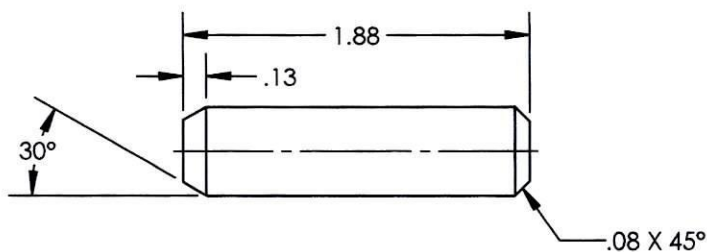
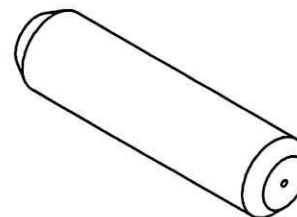


RBD3332-5  
SHAFT

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>              |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3332-5 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                     | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                             | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH SEE RBD3332-041                 | .XX ± .01 ANGLES ± 5°                                  |
| SPEC                                   | .X ± .1 SURFACES = 125/                                |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR:                               | USED ON MODEL                                          |
| APPROVED: GILBERT                      | SEE NOTE 2 SHT 1                                       |
| SCALE 1:1                              | DATE 3/15/2012                                         |
| SHEET 8 OF 19                          |                                                        |

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| REV       | ECR     | DESCRIPTION                   | DATE      | INITIAL | APPROVED |
| 2         | 16-0039 | RBD3332-5 ADDED TO NEW SHEET. | 2/16/2016 | SM      | JAG      |



2X CENTERS OK

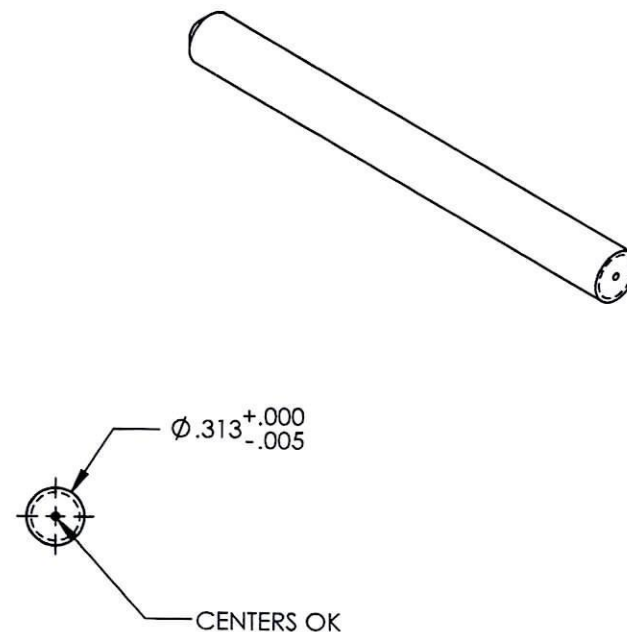
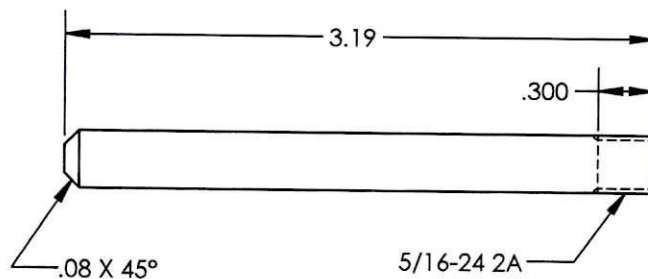
RBD3332-7

PIN

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>              |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3332-7 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                     | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                             | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH SEE RBD3332-043                 | .XX ± .01 ANGLES ± 5°                                  |
| SPEC                                   | .X ± .1 SURFACES = 125/✓                               |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR:                               | USED ON MODEL                                          |
| APPROVED: GILBERT                      | SEE NOTE 2 SHT 1                                       |
| SCALE 1:1                              | DATE 3/15/2015 SHEET 9 OF 19                           |

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| REVISIONS |         |                               |           |         |          |
|-----------|---------|-------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                   | DATE      | INITIAL | APPROVED |
| 2         | 16-0032 | RBD3332-9 ADDED TO NEW SHEET. | 2/16/2016 | SM      | JAG      |



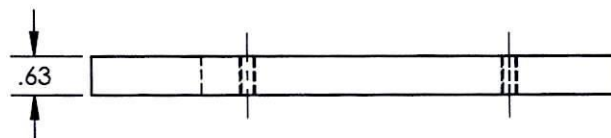
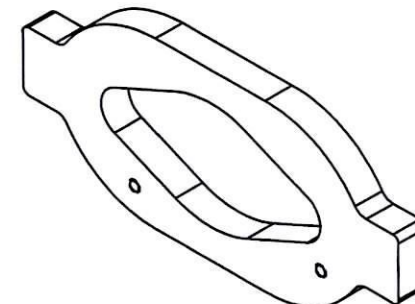
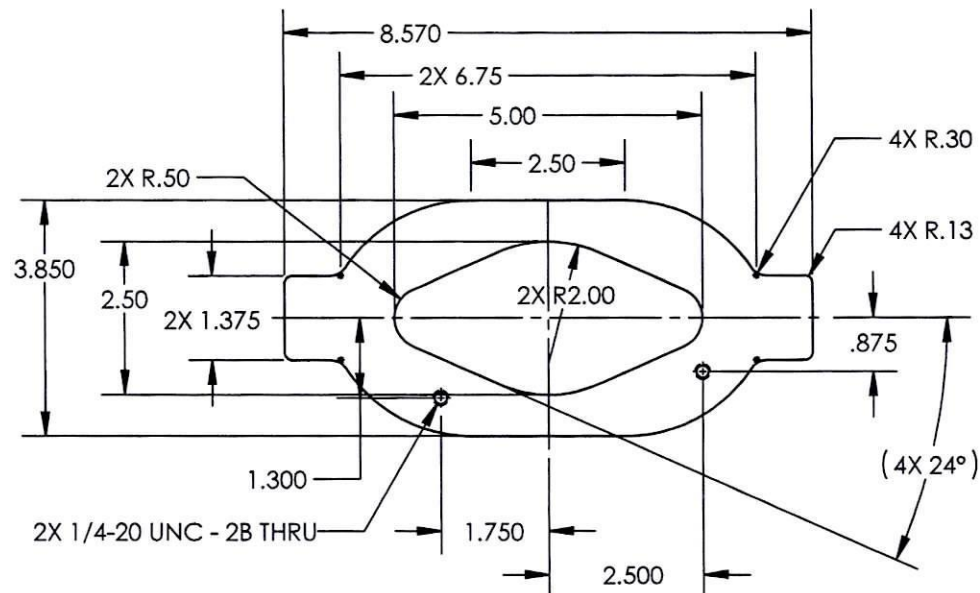
RBD3332-9  
SHAFT

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>DART</b><br>AEROSPACE               |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3332-9 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                     | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                             | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH SEE RBD3332-043                 | .XX ± .01 ANGLES ± 5°                                  |
| SPEC                                   | .X ± .1 SURFACES = 125/                                |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR:                               | USED ON MODEL                                          |
| APPROVED: GILBERT                      | SEE NOTE 2 SHT 1                                       |
| SCALE 1:1                              | DATE 3/15/2012 SHEET 10 OF 19                          |



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|-----------|-----|-------------|------|----------|
| REV       | ECR | DESCRIPTION | DATE | INITIAL  |
|           |     |             |      | APPROVED |

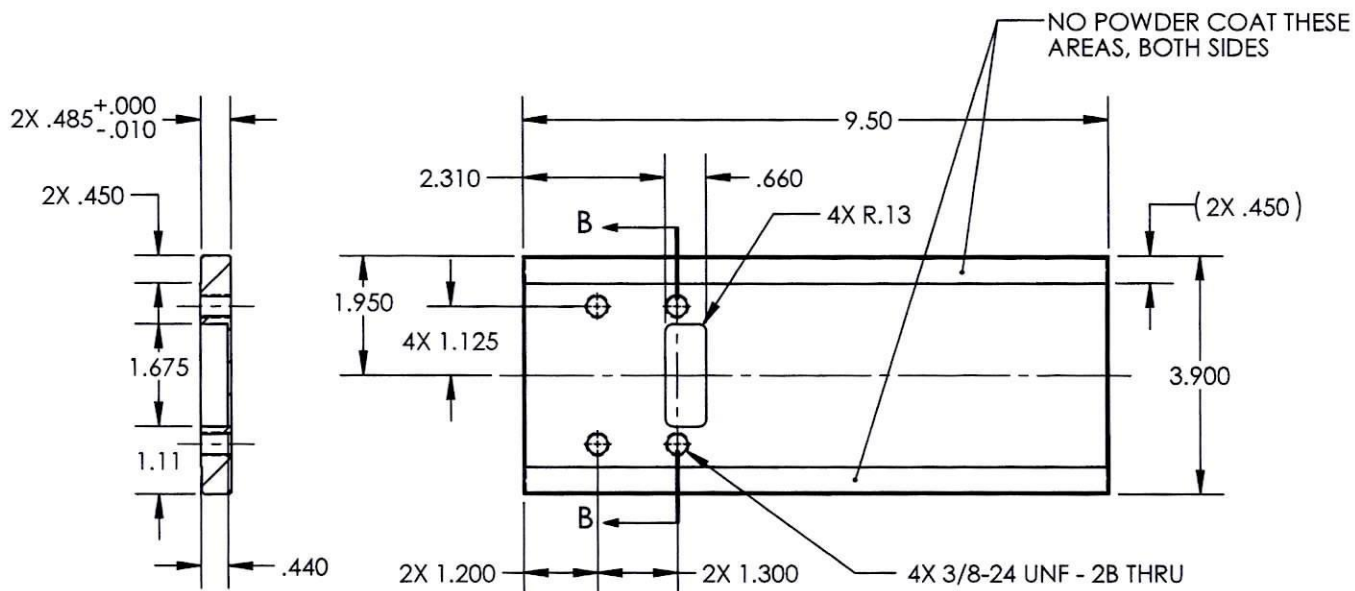


RBD3333-1  
BASE PLATE

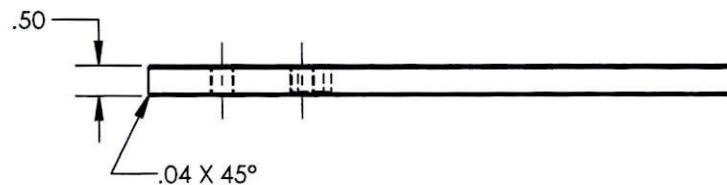
|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>              |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3333-1 | REV<br><b>2</b>                                        |
| MAT'L 4140/4142                        | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| TREAT                                  | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH POWDER COAT YELLOW              | .XX ± .01 ANGLES ± .5°                                 |
| SPEC FED #13538                        | .X ± .1 SURFACES = 125/✓                               |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR:                               | USED ON MODEL                                          |
| APPROVED: GILBERT                      | SEE NOTE 2 SHT 1                                       |
| SCALE 1:3                              | DATE 3/15/2012 SHEET 11 OF 19                          |

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|-----------|---------|-------------------------------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                                                 | DATE      | INITIAL | APPROVED |
| 2         | 16-0039 | RBD3333-3 CH'D DIM WAS .650 IS .660, WAS 1.200 IS 2X 1.200. | 2/17/2016 | SM      | JAG      |



SECTION B-B

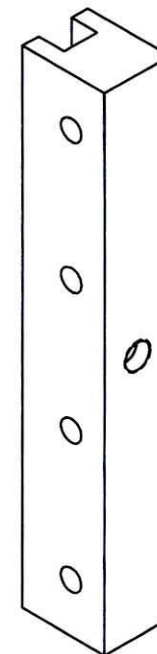
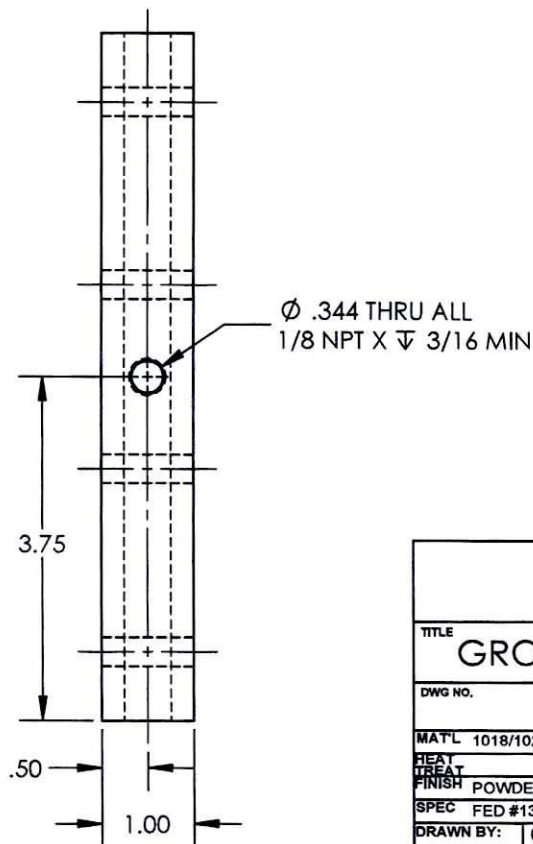
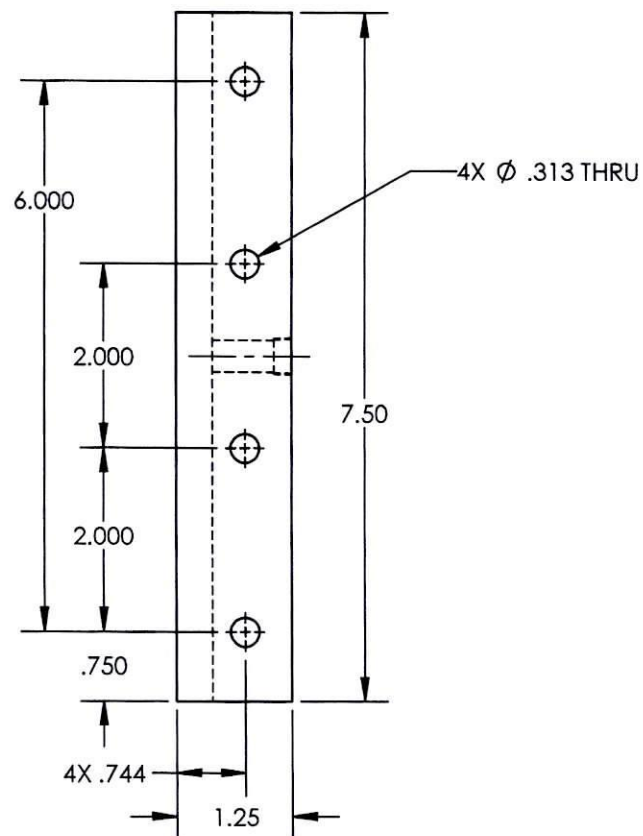
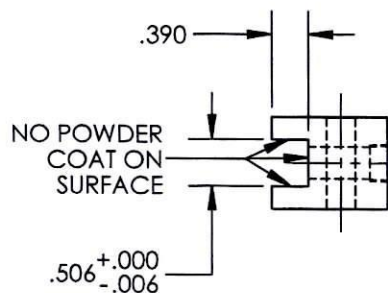


RBD3333-3  
SLIDING PLATE

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>              |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3333-3 | REV<br><b>2</b>                                        |
| MAT'L 4140/4142                        | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                             | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH POWDER COAT YELLOW              | .XX ± .01 ANGLES ± 5°                                  |
| SPEC FED #13538                        | .X ± .1 SURFACES = 125/✓                               |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 X 45° OR .015R        |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR:                               | USED ON MODEL                                          |
| APPROVED: GILBERT                      | SEE NOTE 2 SHT 1                                       |
| SCALE 1:3                              | DATE 3/15/2012                                         |
| SHEET 12 OF 19                         |                                                        |

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|-----------|---------|----------------------------------------|-----------|---------|
| REV       | ECR     | DESCRIPTION                            | DATE      | INITIAL |
| 1         |         | -5 CH'D DIM WAS Ø.332 IS .344.         | 6/18/2014 | RJC     |
| 2         | 16-0039 | RBD3333-5 CH'D DIM WAS Ø.334 IS Ø.344. | 2/17/2016 | SM      |

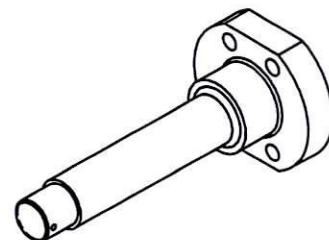
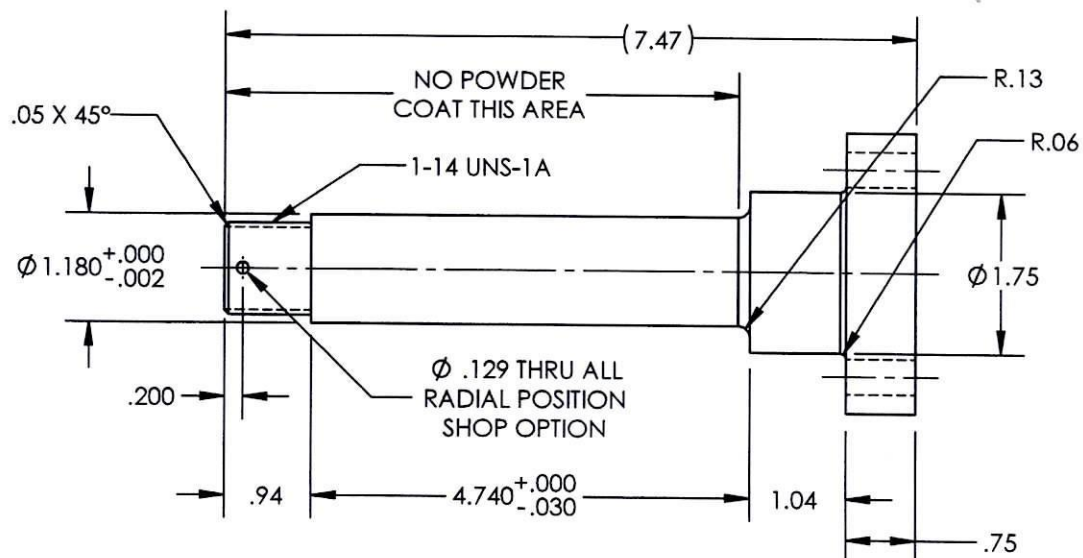
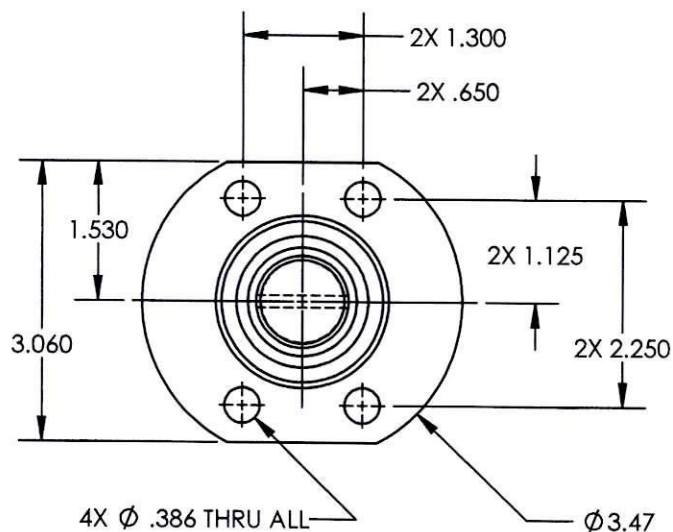


RBD3333-5  
RAIL

|                                                                                                                                                     |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>DART<br/>AEROSPACE</b>                                                                                                                           |                 |
| TITLE<br><b>GROUND HANDLING WHEELS</b>                                                                                                              |                 |
| DWG NO.<br>RBD412-729-011<br>RBD3333-5                                                                                                              | REV<br><b>2</b> |
| MAT'L 1018/1020 CR<br>FINISH POWDER COAT YELLOW<br>SPEC FED #13538                                                                                  |                 |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± .5°<br>.X ± .1 SURFACES = 125/          |                 |
| 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R<br>2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING<br>3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009 |                 |
| DRAWN BY: GILBERT<br>CHECKED:<br>OPPTS APPR:<br>QA APPR:<br>APPROVED: GILBERT                                                                       |                 |
| USED ON MODEL<br>SEE NOTE 2 SHT 1                                                                                                                   |                 |
| SCALE 1:2                                                                                                                                           | DATE 3/15/2012  |
| SHEET 13 OF 19                                                                                                                                      |                 |

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|-----------|---------|----------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                            | DATE      | INITIAL | APPROVED |
| 2         | 16-0039 | RBD3334-1 CH'D DIM WAS 7.47 IS (7.47). | 2/17/2016 | SM      | JAG      |



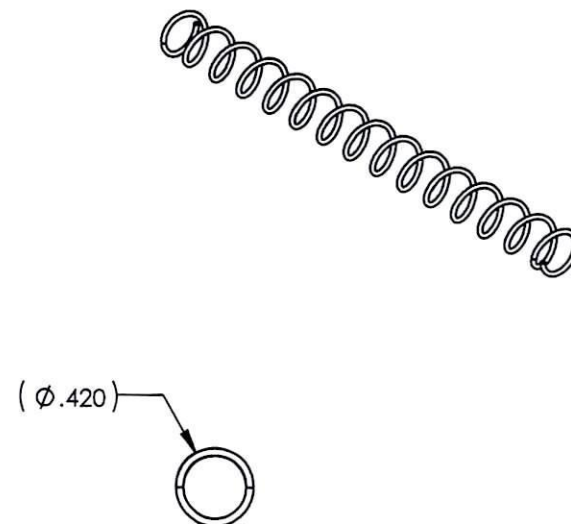
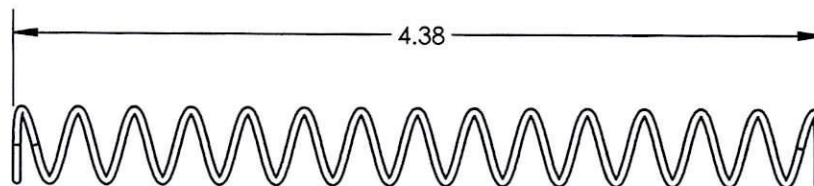
RBD3334-1  
WHEEL SHAFT

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>DART</b><br>AEROSPACE               |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3334-1 | REV<br><b>2</b>                                        |
| MAT'L 4140/4142                        | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                             | .XXX ± .008 FRACTIONS ± 1/8                            |
| FINISH POWDER COAT YELLOW              | .XX ± .01 ANGLES ± 5°                                  |
| SPEC FED #13538                        | .X ± .1 SURFACES = 125/✓                               |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR:                               | USED ON MODEL                                          |
| APPROVED: GILBERT                      | SEE NOTE 2 SHT 1                                       |
| SCALE 1:2                              | DATE 3/15/2012 SHEET 14 OF 19                          |



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| REV       | ECR     | DESCRIPTION                   | DATE      | INITIAL | APPROVED |
| 2         | 16-0039 | RBD3335-3 MOVED TO NEW SHEET. | 2/16/2016 | SM      | JAG      |



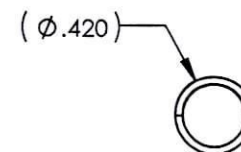
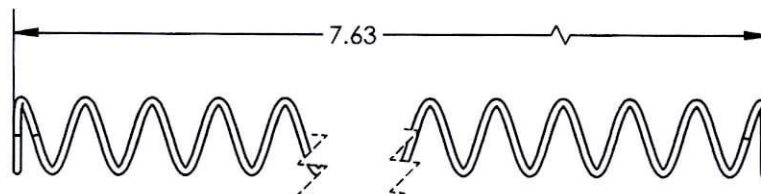
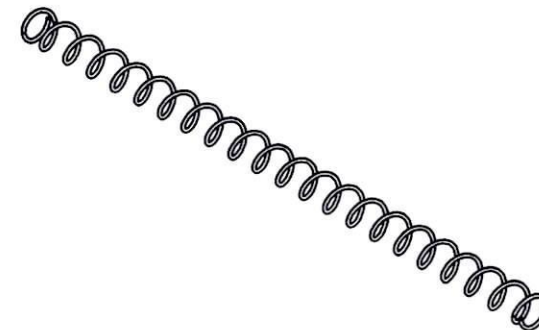
RBD3335-1

SPRING

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>              |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3335-1 | REV<br><b>2</b>                                        |
| MAT'L STEEL                            | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                             | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH                                 | .XX ± .01 ANGLES ± 5°                                  |
| SPEC                                   | .X ± .1 SURFACES = 125/√                               |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR:                               | USED ON MODEL                                          |
| APPROVED: GILBERT                      | SEE NOTE 2 SHT 1                                       |
| SCALE 1:1                              | DATE 3/15/2012 SHEET 15 OF 19                          |

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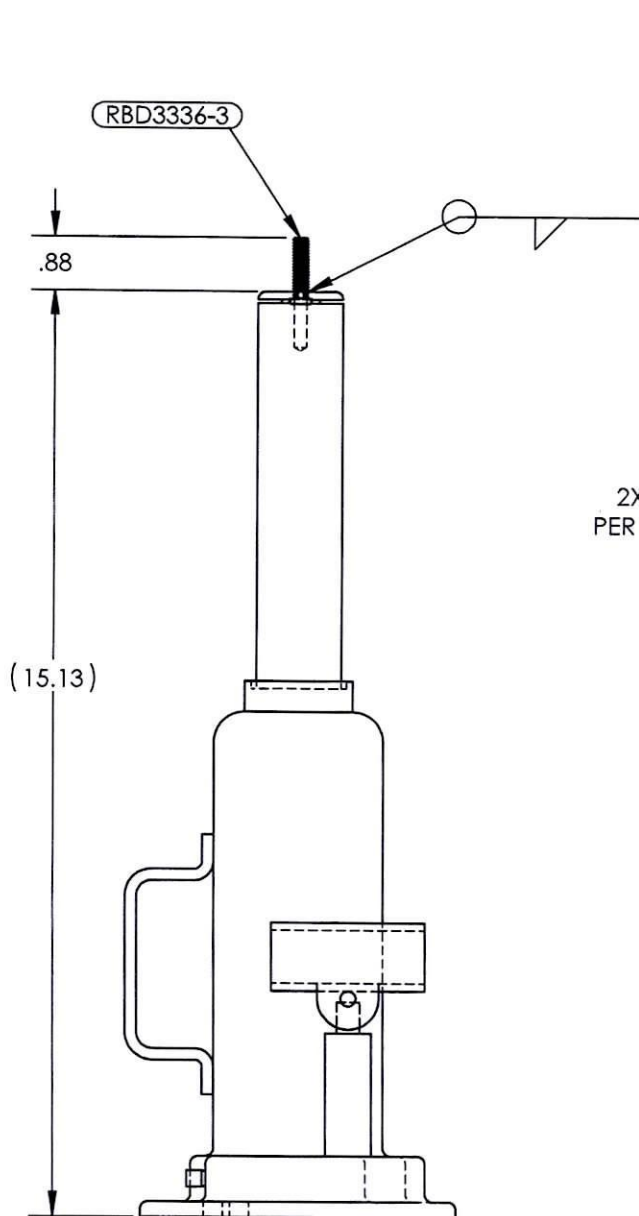
| REVISIONS |         |                               |           |         |          |
|-----------|---------|-------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                   | DATE      | INITIAL | APPROVED |
| 2         | 16-0039 | RBD3335-3 ADDED TO NEW SHEET. | 2/16/2016 | SM      | JAG      |



|                                        |                                                  |
|----------------------------------------|--------------------------------------------------|
| <b>DART</b><br>AEROSPACE               |                                                  |
| TITLE<br><b>GROUND HANDLING WHEELS</b> |                                                  |
| DWG NO.<br>RBD412-729-011<br>RBD3335-3 | REV<br><b>2</b>                                  |
| MAT'L STEEL                            | UNLESS OTHERWISE SPECIFIED                       |
| HEAT                                   | DIMENSIONS ARE IN INCHES                         |
| TREAT                                  | .XXX ± .005 FRACTIONS ± 1/16                     |
| FINISH                                 | .XX ± .01 ANGLES ± .5°                           |
| SPEC                                   | .X ± .1 SURFACES = 125/√                         |
| DRAWN BY: GILBERT                      | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R  |
| CHECKED:                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING     |
| OPPS APPR:                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009 |
| QA APPR:                               | USED ON MODEL                                    |
| APPROVED: GILBERT                      |                                                  |
| SCALE 1:1                              | DATE 3/15/2012 SHEET 16 OF 19                    |

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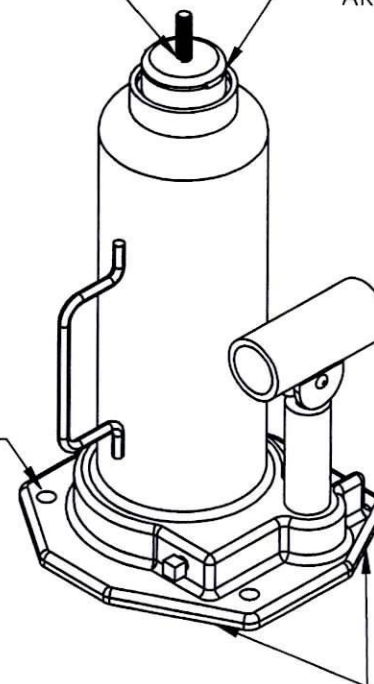
| REVISIONS |     |             |          |
|-----------|-----|-------------|----------|
| REV       | ECR | DESCRIPTION | DATE     |
|           |     |             | INITIAL  |
|           |     |             | APPROVED |



1/4-20  $\nabla$  .75  
AT CENTER OF CAP

WELD CAP WITH SHAFT WITH .38  
LONG TACK WELDS (2 PLACES)  
AROUND PERIMETER

2X  $\varnothing$  .313 THRU ALL  
PER TEMPLATE DT8761



TRIM EDGES AS PER  
TEMPLATE DT8761A  
AND PAINT CUTS TO  
MATCH COLOR.

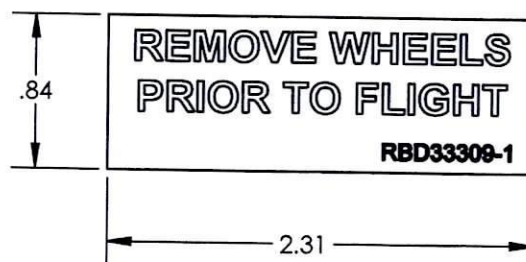
RBD3336-1

JACK

|                                          |                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                |                                                                                                                                                                                                                                                                                                                      |
| TITLE<br><b>GROUND HANDLING WHEELS</b>   |                                                                                                                                                                                                                                                                                                                      |
| DWG NO.<br>RBD412-729-011<br>RBD3336-1   | REV<br><b>2</b>                                                                                                                                                                                                                                                                                                      |
| MAT'L<br>HEAT<br>TREAT<br>FINISH<br>SPEC | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX $\pm$ .005 FRACTIONS $\pm$ 1/8<br>.XX $\pm$ .01 ANGLES $\pm$ 5°<br>.X $\pm$ .1 SURFACES = 125/<br>1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R<br>2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING<br>3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009 |
| DRAWN BY: GILBERT                        | USED ON MODEL                                                                                                                                                                                                                                                                                                        |
| CHECKED:                                 | SEE NOTE 2 SHT 1                                                                                                                                                                                                                                                                                                     |
| OPPS APPR:                               |                                                                                                                                                                                                                                                                                                                      |
| QA APPR:                                 |                                                                                                                                                                                                                                                                                                                      |
| APPROVED: GILBERT                        |                                                                                                                                                                                                                                                                                                                      |
| SCALE 1:3                                | DATE 3/28/2012 SHEET 17 OF 19                                                                                                                                                                                                                                                                                        |

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| REV       | ECR     | DESCRIPTION                        | DATE      | INITIAL | APPROVED |
| 2         | 16-0039 | RBD3309-3 MOVED TO SEPERATE SHEET. | 2/16/2016 | SM      | JAG      |



NOTE:

1) MATERIAL: BLACK LETTERS ON ADHESIVE BACK

|                                          |                                                                                                                                             |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                |                                                                                                                                             |
| TITLE<br><b>ROUND HANDLING WHEELS</b>    |                                                                                                                                             |
| DWG NO.<br>RBD412-729-011<br>RBD3309-1   | REV<br><b>2</b>                                                                                                                             |
| MAT'L<br>HEAT<br>TREAT<br>FINISH<br>SPEC | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± .5°<br>.X ± .1 SURFACES = 125/✓ |
| DRAWN BY: GILBERT                        | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R                                                                                             |
| CHECKED:                                 | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING                                                                                                |
| OPPS APPR:                               | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009                                                                                            |
| QA APPR:                                 | USED ON MODEL                                                                                                                               |
| APPROVED: GILBERT                        |                                                                                                                                             |
| SCALE 1:1                                | DATE 3/15/2015 SHEET 18 OF 19                                                                                                               |

RBD3309-1

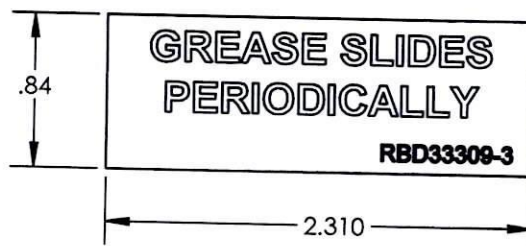
LABEL, REMOVE BEFORE FLIGHT



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| REVISIONS |         |                               | DATE      | INITIAL | APPROVED |
|-----------|---------|-------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                   |           |         |          |
| 2         | 16-0039 | RBD3309-3 ADDED TO NEW SHEET. | 2/16/2016 | SM      | JAG      |

**GREASE SLIDES  
PERIODICALLY**  
RBD33309-3



**NOTE:**

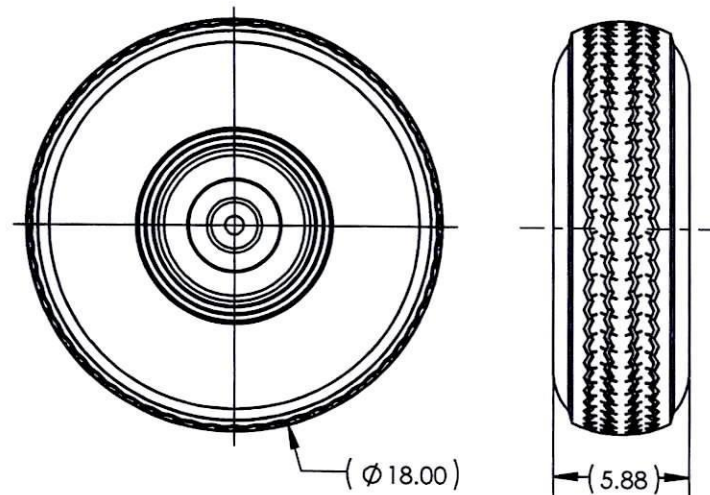
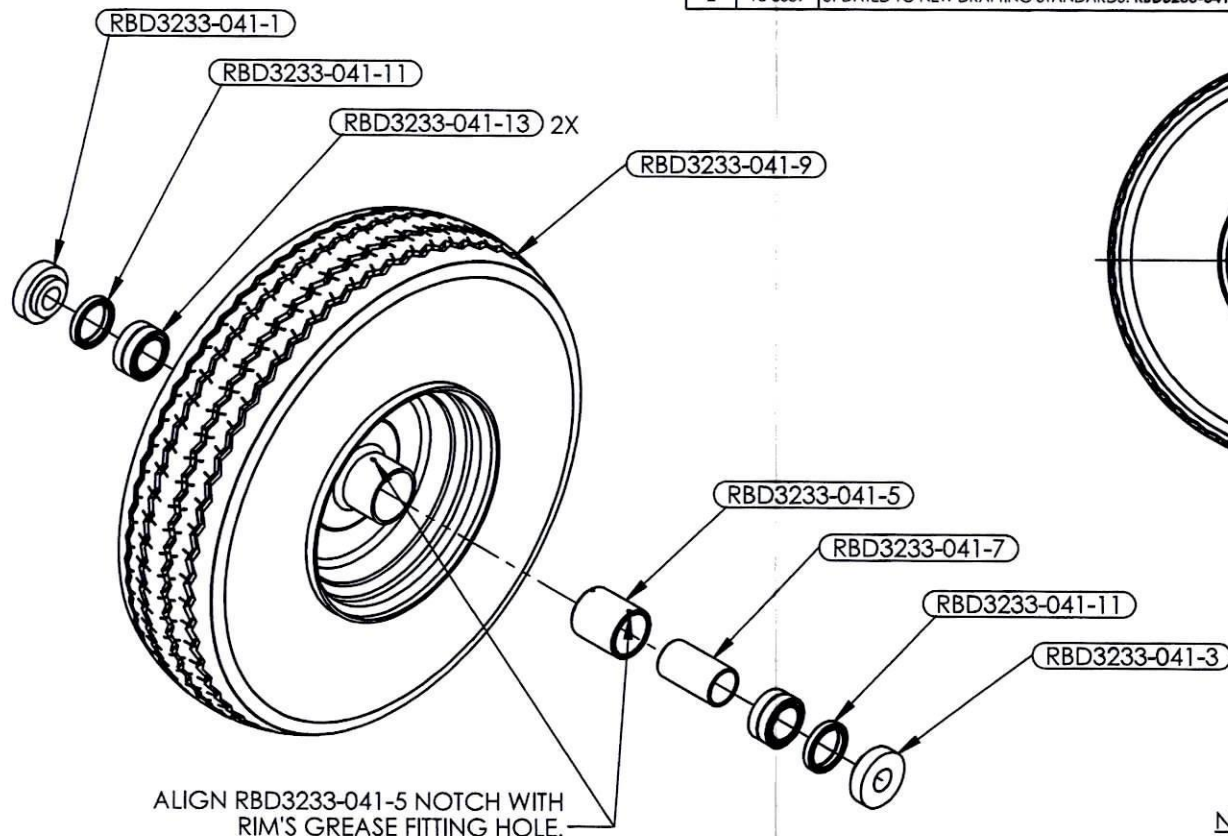
1) MATERIAL: BLACK LETTERS ON ADHESIVE BACK

|                                       |                                                        |
|---------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>             |                                                        |
| <b>TITLE</b><br>ROUND HANDLING WHEELS |                                                        |
| DWG NO.                               | RBD412-729-011<br>RBD3309-3                            |
| MAT'L                                 | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT                                  | .XXX ± .005 FRACTIONS ± 1/8                            |
| TREAT                                 | .XX ± .01 ANGLES ± 5°                                  |
| FINISH                                | .X ± .1 SURFACES = 125/                                |
| SPEC                                  | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| DRAWN BY:                             | GILBERT                                                |
| CHECKED:                              |                                                        |
| OPPS APPR:                            |                                                        |
| QA APPR:                              |                                                        |
| APPROVED:                             | GILBERT                                                |
| SCALE                                 | 1:1                                                    |
| DATE                                  | 3/15/2015                                              |
| SHEET 19 OF 19                        |                                                        |

RBD3309-3  
LABEL, GREASE SLIDES

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|-----------|---------|---------------------------------------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                                                         | DATE      | INITIAL | APPROVED |
| C         |         | UPDATE TO NEW DRAFTING STANDARD                                     | 4/16/2012 | JAG     |          |
| 2         | 16-0039 | UPDATED TO NEW DRAFTING STANDARDS. RBD3233-041-5 ADD DIM 2X FULL R. | 2/15/2016 | SM      | JAG      |



| WHEEL SPECIFICATIONS                |                       |                         |
|-------------------------------------|-----------------------|-------------------------|
| SIZE                                | MAX. LOAD             | MAX. INFLATION PRESSURE |
| TIRE: 19.0 x 5.8<br>RIM: 5.70 x 8.0 | 910 lbs.<br>(RANGE C) | 90 psi*                 |

\* MANUFACTURER'S RECOMENDATIONS ARE 75 PSI FOR HIGH SPEED USE.

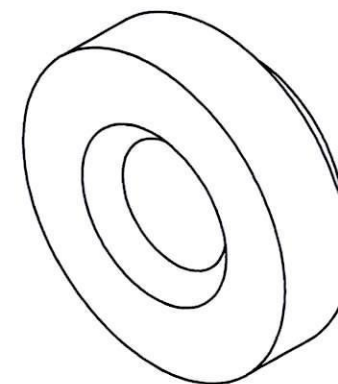
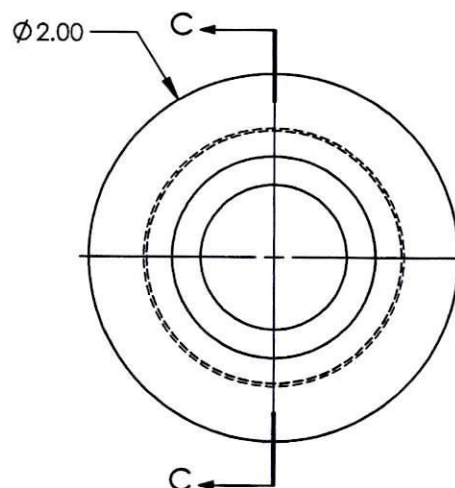
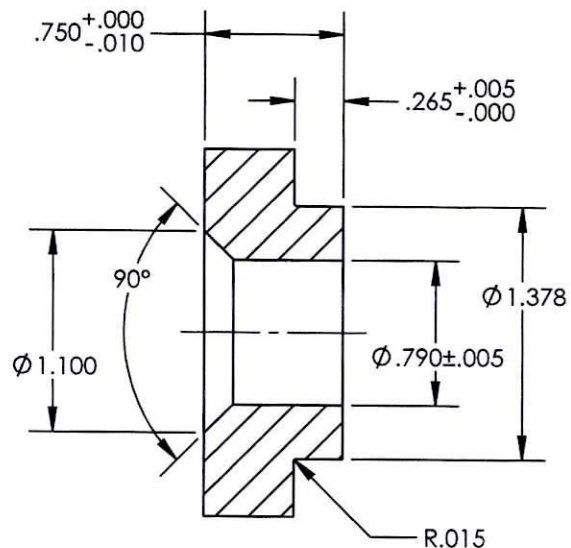
NOTE:  
USED ON BELL MODELS 204, 205, 212,214,412, UH1, 222, 230, & AH1

|                                                                                       |                |                                                                                                                                            |          |
|---------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------|
|  |                |                                                                                                                                            |          |
| TITLE<br>GROUND HANDLING WHEELS                                                       |                |                                                                                                                                            |          |
| DWG NO.<br>RBD412-729-011<br>RBD3233-041                                              |                |                                                                                                                                            | REV<br>2 |
| MAT'L<br>HEAT<br>TREAT<br>FINISH<br>SPEC                                              |                | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± 5°<br>.X ± .1 SURFACES = 125 ✓ |          |
| DRAWN BY: GILBERT                                                                     |                | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R                                                                                            |          |
| CHECKED: CLOUGH                                                                       |                | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING                                                                                               |          |
| OPPS APPR: ANDERSON                                                                   |                | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.6M-2009                                                                                           |          |
| QA APPR: LINDSAY                                                                      |                | USED ON MODEL                                                                                                                              |          |
| APPROVED: GILBERT                                                                     |                |                                                                                                                                            |          |
| SCALE 1:8                                                                             | DATE 3/16/2012 | SHEET 1 OF 5                                                                                                                               |          |

| ASSY QTY | ASSY QTY | B/O | Part #         | UNIT QTY | Description       | Material     | B/O INFORMATION OR SPECIFICATIONS | PG. |
|----------|----------|-----|----------------|----------|-------------------|--------------|-----------------------------------|-----|
|          |          |     | RBD3233-041-1  | 1        | INSIDE WASHER     | 1018/1020 CR |                                   | 2   |
|          |          |     | RBD3233-041-3  | 1        | OUTSIDE WASHER    | 1018/1020 CR |                                   | 3   |
|          |          |     | RBD3233-041-5  | 1        | HUB SLEEVE        | 1018/1020 CR |                                   | 4   |
|          |          |     | RBD3233-041-7  | 1        | SHAFT SLEEVE      | 1018/1020 CR |                                   | 5   |
|          |          | B/O | RBD3233-041-9  | 1        | TIRE & WHEEL ASSY |              | MCMaster-CARR # 8353T88           | 1   |
|          |          | B/O | RBD3233-041-11 | 2        | BEARING SEAL      |              | TCM 35X45X7TC                     | 1   |
|          |          | B/O | RBD3233-041-13 | 2        | ROLLER BEARING    |              | NKJ 30/20                         | 1   |

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|           |     |             | INITIAL  |
|           |     |             | APPROVED |



SECTION C-C

RBD3233-041-1

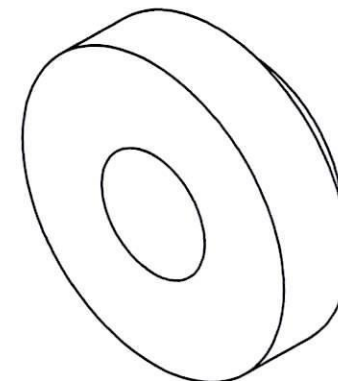
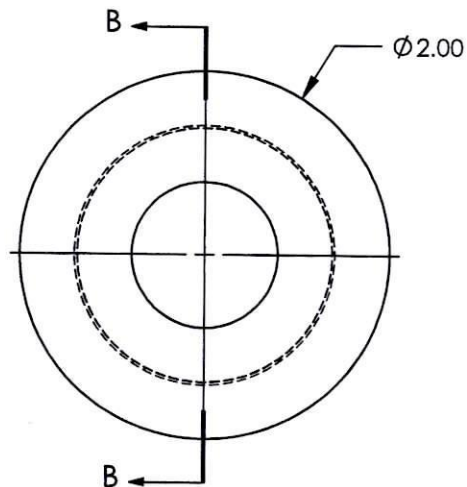
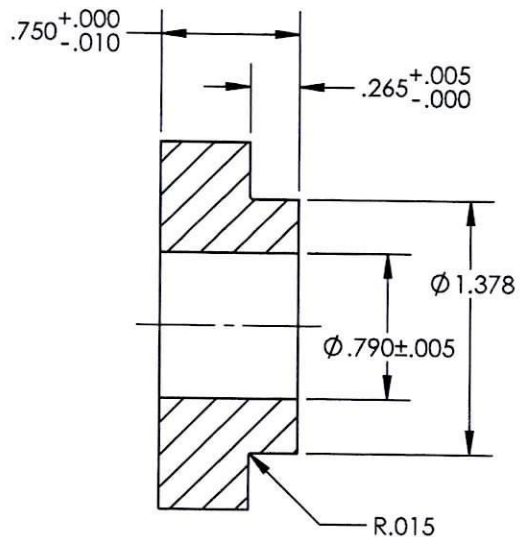
INSIDE WASHER

|                                            |                                                        |
|--------------------------------------------|--------------------------------------------------------|
| <b>DART</b><br>AEROSPACE                   |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b>     |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3233-041-1 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                         | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                                 | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH POWDER COAT YELLOW                  | .XX ± .01 ANGLES ± 5°                                  |
| SPEC FED #13538                            | .X ± .1 SURFACES = 125/                                |
| DRAWN BY: GILBERT                          | 1. BREAK ALL SHARP EDGES<br>Ø15 x 45° OR .015R         |
| CHECKED: CLOUGH                            | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR: ANDERSON                        | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR: LINDSAY                           | USED ON MODEL                                          |
| APPROVED: GILBERT                          |                                                        |
| SCALE 1:1                                  | DATE 3/16/2012                                         |
| SHEET 2 OF 5                               |                                                        |



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| REV       | ECR | DESCRIPTION | DATE     |
|           |     |             | INITIAL  |
|           |     |             | APPROVED |



SECTION B-B

RBD3233-041-3

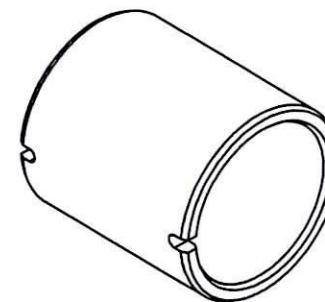
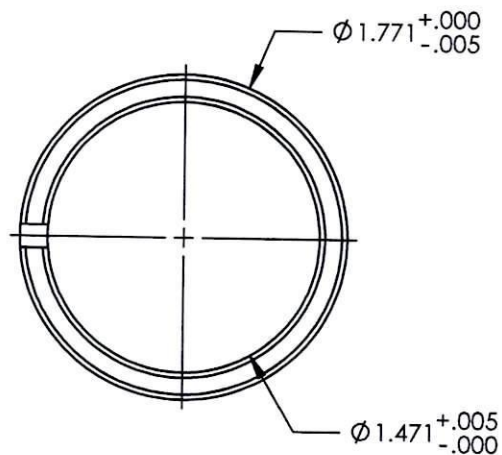
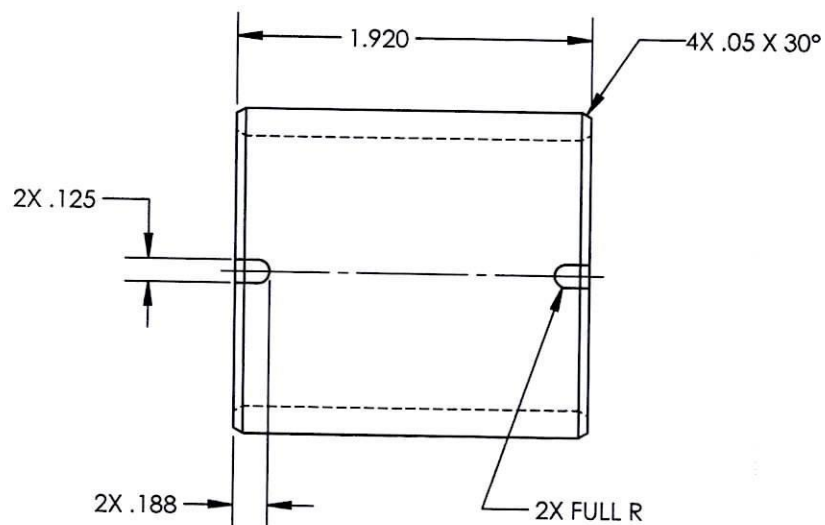
OUTSIDE WASHER

|                                            |                              |
|--------------------------------------------|------------------------------|
| <b>DART</b><br>AEROSPACE                   |                              |
| TITLE<br><b>GROUND HANDLING WHEELS</b>     |                              |
| DWG NO.<br>RBD412-729-011<br>RBD3233-041-3 | REV<br><b>2</b>              |
| MAT'L 1018/1020 CR                         | UNLESS OTHERWISE SPECIFIED   |
| HEAT TREAT                                 | DIMENSIONS ARE IN INCHES     |
| FINISH POWDER COAT YELLOW                  | .XXX ± .005 FRACTIONS ± 1/8  |
| SPEC FED #13538                            | .XX ± .01 ANGLES ± 5°        |
|                                            | .X ± .1 SURFACES = 125°      |
| DRAWN BY: GILBERT                          | 1. BREAK ALL SHARP EDGES     |
| CHECKED: CLOUGH                            | .015 x 45° OR .015R          |
| OPPS APPR: ANDERSON                        | 2. DIMENSIONAL LIMITS APPLY  |
| QA APPR: LINDSAY                           | AFTER PLATING                |
| APPROVED: GILBERT                          | 3. INTERPRET DIM AND TOL PER |
|                                            | ASME Y14.5M-2009             |
|                                            | USED ON MODEL                |
| SCALE 1:1                                  | DATE 3/16/2012               |
|                                            | SHEET 3 OF 5                 |



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| 2         | 16-0039 | RBD3233-041-5 ADD DIM 2X FULL R. | 2/15/2016 |
|           |         |                                  | SM        |
|           |         |                                  | JAG       |



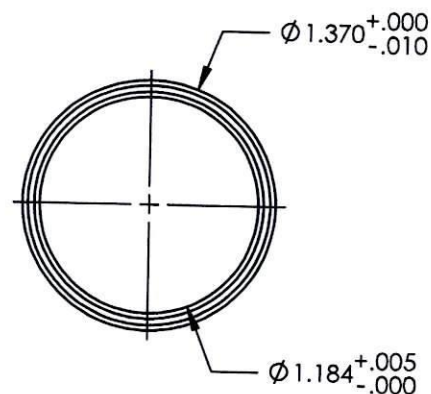
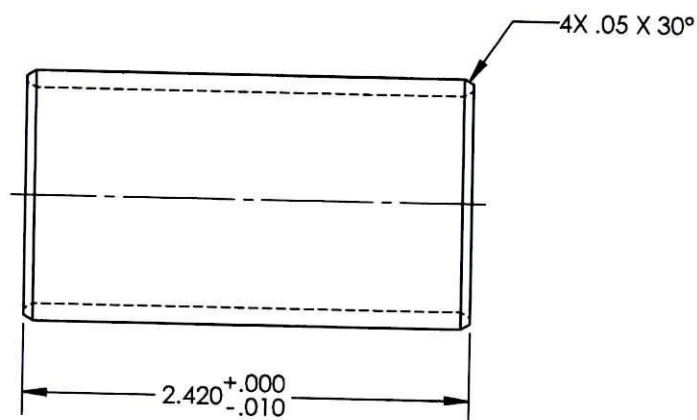
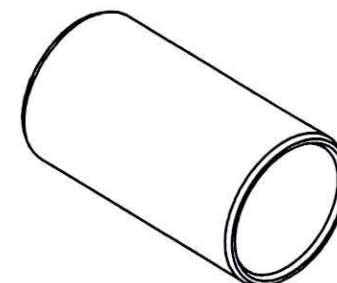
RBD3233-041-5

HUB SLEEVE

|                                            |                                                        |
|--------------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                  |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b>     |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3233-041-5 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                         | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                                 | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH                                     | .XX ± .01 ANGLES ± 5°                                  |
| SPEC                                       | .X ± .1 SURFACES = 125°                                |
| DRAWN BY: GILBERT                          | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED: CLOUGH                            | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR: ANDERSON                        | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR: LINDSAY                           | USED ON MODEL                                          |
| APPROVED: GILBERT                          | SEE NOTE 1 SHT 1                                       |
| SCALE 1:1                                  | DATE 3/16/2012                                         |
| SHEET 4 OF 5                               |                                                        |

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|-----------|-----|-------------|------|---------|----------|
| REV       | ECR | DESCRIPTION |      |         |          |



RBD3233-041-7

SHAFT SLEEVE

|                                            |                                                        |
|--------------------------------------------|--------------------------------------------------------|
| <b>DART</b><br>AEROSPACE                   |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b>     |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3233-041-7 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                         | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                                 | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH                                     | .XX ± .01 ANGLES ± .5°                                 |
| SPEC                                       | .X ± .1 SURFACES = 125/                                |
| DRAWN BY: GILBERT                          | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED: CLOUGH                            | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR: ANDERSON                        | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR: LINDSAY                           | USED ON MODEL                                          |
| APPROVED: GILBERT                          | SEE NOTE 1 SHT 1                                       |
| SCALE 1:1                                  | DATE 3/16/2012                                         |
| SHEET 5 OF 5                               |                                                        |

(TYP)

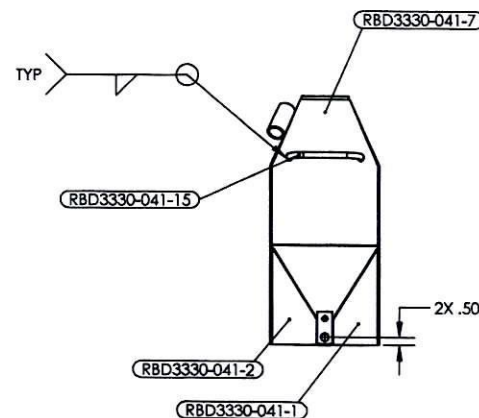
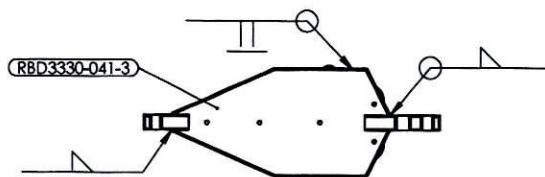
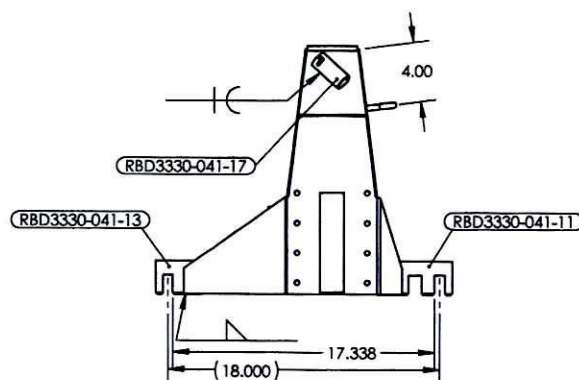
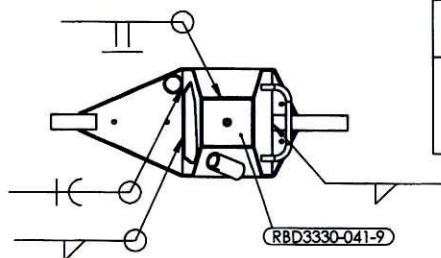
10.78

A

A

RBD3330-041-19

RBD3330-041-5



| ASSY QTY | ASSY QTY | B/O | Part #         | UNIT QTY | Description       | Material     | B/O INFORMATION OR SPECIFICATIONS | PG. |
|----------|----------|-----|----------------|----------|-------------------|--------------|-----------------------------------|-----|
|          |          |     | RBD3330-041-1  | 1        | PANEL             | 1018/1020 CR |                                   | 2   |
|          |          |     | RBD3330-041-2  | 1        | PANEL             | 1018/1020 CR |                                   | 3   |
|          |          |     | RBD3330-041-3  | 1        | PLATE             | 1018/1020 CR |                                   | 4   |
|          |          |     | RBD3330-041-5  | 1        | PLATE, FRONT      | 1018/1020 CR |                                   | 5   |
|          |          |     | RBD3330-041-7  | 1        | PLATE, REAR       | 1018/1020 CR |                                   | 6   |
|          |          |     | RBD3330-041-9  | 1        | TOP PLATE         | 1018/1020 CR |                                   | 7   |
|          |          |     | RBD3330-041-11 | 1        | LONG PIN BRACKET  | 1018/1020 CR |                                   | 8   |
|          |          |     | RBD3330-041-13 | 1        | SHORT PIN BRACKET | 1018/1020 CR |                                   | 9   |
|          |          |     | RBD3330-041-15 | 1        | HANDLE            | 1018/1020 CR |                                   | 10  |
|          |          |     | RBD3330-041-17 | 1        | HANDLE SOCKET     | HREW         |                                   | 11  |
|          |          |     | RBD3330-041-19 | 1        | HANDLE ARM        | HREW         |                                   | 12  |

RBD3330-041

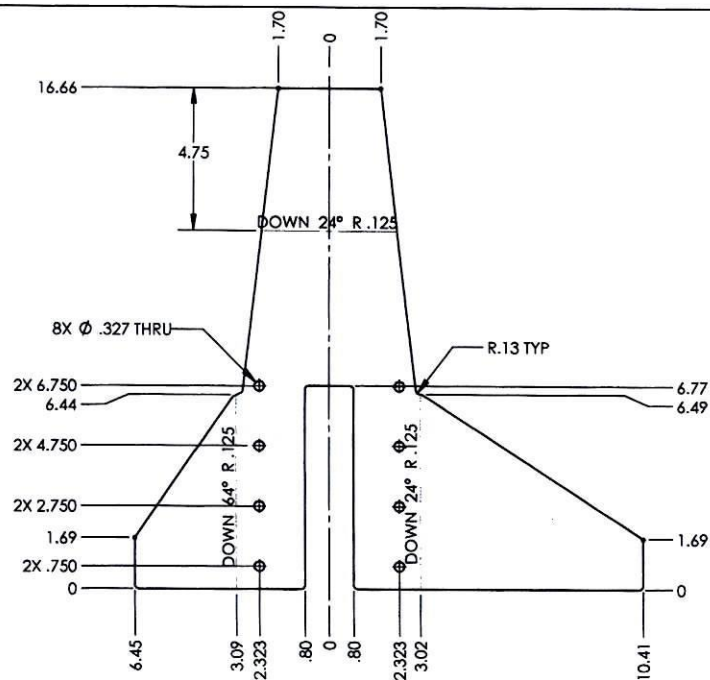
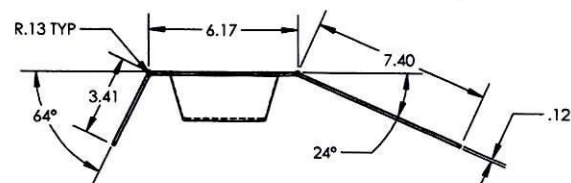
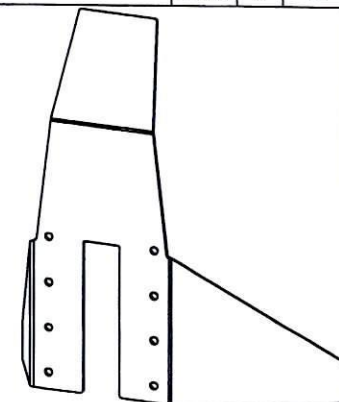
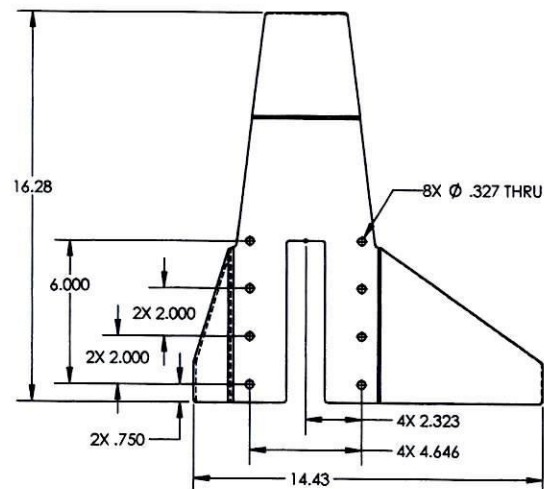
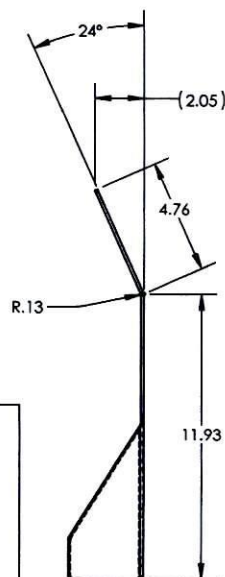
[illegible]

**NOTE:**  
1. POSITION PARTS PER JIG D333-041T1.  
2. USED ON BELL MODELS 204, 205, 212, 214, 412, UH1, 222, 230, & AH1.

|                                                                                                                                                  |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|                                                             |                   |
| TITLE<br>GROUND HANDLING WHEEL                                                                                                                   |                   |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041                                                                                                         | REV<br>2          |
| MAT'L<br>REAT<br>REAT<br>SPEC: POWDER COAT YELLOW<br>SPEC FED: 13538                                                                             |                   |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>XXX .25 FRACTIONS & 1/8<br>.25 .50 ANGLE 45°<br>.25 .50 ANGLE 45° ✓                    |                   |
| 1. BREAK ALL SHARP EDGES<br>.015 ± .05 OR .01SR<br>2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING<br>3. DIM. TOL. AND TOL. PER<br>ASME Y14.5M-2009 |                   |
| DRAWN BY: GILBERT<br>CHECKED: CLOUGH<br>OP'S APPE: ANDERSON<br>G APPR: LINDSAY<br>APPROVED: GILBERT                                              |                   |
| USED ON MODEL<br>SEE NOTE 2                                                                                                                      |                   |
| SCALE<br>1:8                                                                                                                                     | DATE<br>3/16/2012 |
| SHEET 1 OF 12                                                                                                                                    |                   |

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| REVISIONS |         |                                                                                                                            |           |         |
|-----------|---------|----------------------------------------------------------------------------------------------------------------------------|-----------|---------|
| REV       | ECR     | DESCRIPTION                                                                                                                | DATE      | INITIAL |
| C         |         | UPDATE TO NEW DRAFTING STANDARD                                                                                            | 4/16/2012 | JAG     |
| 1         |         | RBD3330-041-1 & -2 CHD DIM WAS .12 IS (.12)                                                                                | 6/18/2014 | GE      |
| 2         | 16-0039 | RBD3330-041-1 CHD DIM WAS 2.323 IS 4X 2.323. REMOVED DIM 4.446. ADDED DIM 4X 2.323. RBD3330-042-2 MOVED TO SEPERATE SHEET. | 2/11/2016 | JAG     |



FLAT PATTERN  
FOR REFERENCE ONLY

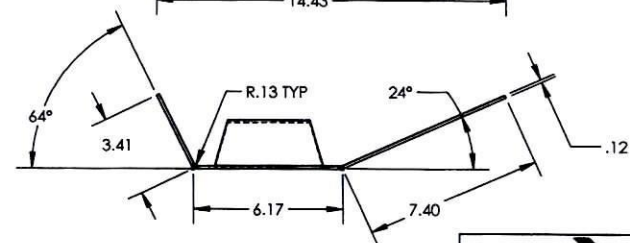
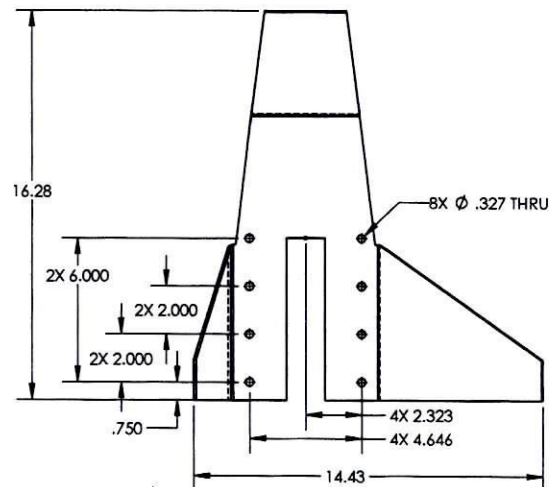
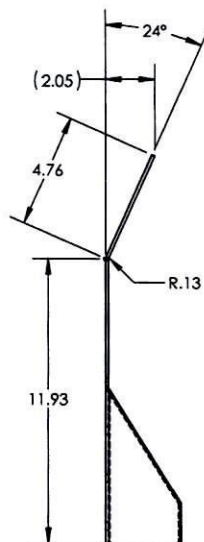
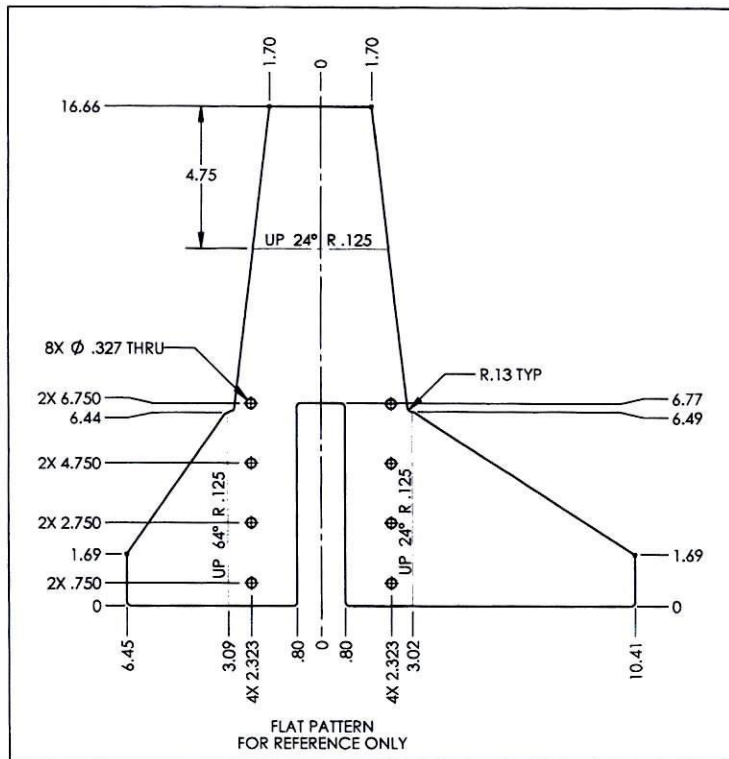
(RBD3330-041-1)  
PANEL

|                          |     |                              |           |
|--------------------------|-----|------------------------------|-----------|
| <b>DART</b><br>AEROSPACE |     | TITLE                        |           |
|                          |     | GROUND HANDLING WHEELS       |           |
| DWG NO.                  |     | REV                          |           |
| RBD412-729-011           |     | 2                            |           |
| RBD3330-041-1            |     |                              |           |
| MATERIAL                 |     | UNLESS OTHERWISE SPECIFIED   |           |
| 1018/1020 CR             |     | DIMENSIONS ARE IN INCHES     |           |
| FINISH                   |     | FRACTIONS & 1/16             |           |
| SEE FRAME WELDMENT       |     | ANGLES 61°                   |           |
|                          |     | SURFACES = 125               |           |
| SPEC                     |     | 1. BREAK ALL SHARP EDGES     |           |
|                          |     | .015 ± 45° OR .015R          |           |
| DRAWN BY: GILBERT        |     | 2. DIMENSIONAL LIMITS APPLY  |           |
| CHECKED: CLOUGH          |     | AFTER PLATING                |           |
| COPS APPR: ANDERSON      |     | 3. INTERPRET DIM AND TOL PER |           |
| QA APPR: LINDSAY         |     | ASME Y14.5M-2009             |           |
| APPROVED: GILBERT        |     | USED ON MODEL                |           |
| SCALE                    | 1:5 | DATE                         | 3/27/2015 |
|                          |     | SHEET 2 OF 12                |           |



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| REVISIONS |         |                                   |           |
|-----------|---------|-----------------------------------|-----------|
| REV       | ECR     | DESCRIPTION                       | DATE      |
| 2         | 16-0039 | RBD3330-041-2 ADDED TO NEW SHEET. | 2/11/2016 |
|           |         |                                   | INITIAL   |
|           |         |                                   | JAG       |

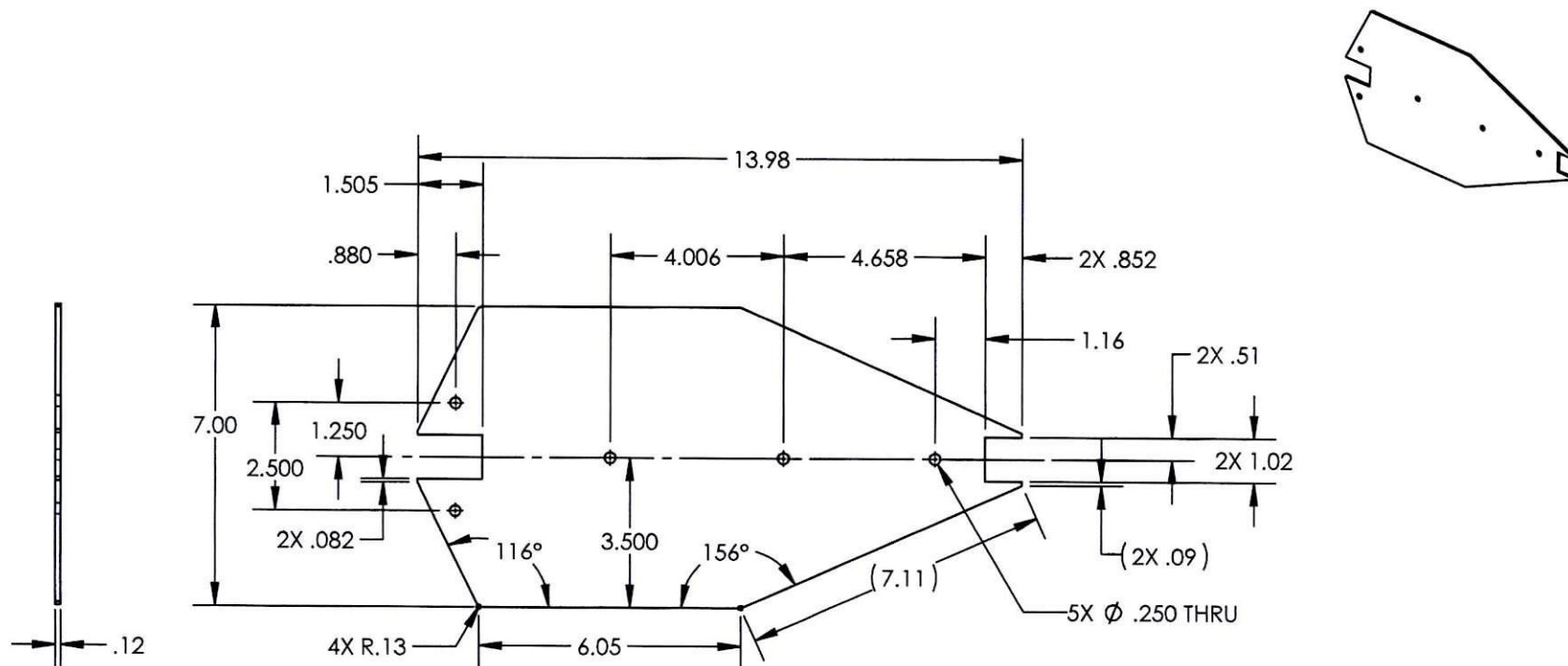


|                                            |                            |
|--------------------------------------------|----------------------------|
| <b>DART</b><br>AEROSPACE                   |                            |
| TITLE<br>GROUND HANDLING WHEELS            |                            |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-2 | REV<br>2                   |
| MATERIAL 1018/1020 CR                      |                            |
| FINISH SEE FRAME WELDMENT                  |                            |
| SPEC                                       |                            |
| DRAWN BY: GILBERT                          | UNLESS OTHERWISE SPECIFIED |
| CHECKED: CLOUGH                            | DIMENSIONS ARE IN INCHES   |
| OPPS APPR: ANDERSON                        | JOX ± .010 FRACTIONS ± 1/8 |
| QA APPR: LINDSAY                           | JOX ± .03 ANGLES ± 1°      |
| APPROVED: GILBERT                          | JA ± .1 SURFACES ± .125    |
| SCALE 1:5                                  | DATE 3/27/2015             |
| SHEET 3 OF 12                              |                            |

RBD3330-041-2  
PANEL

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| REVISIONS |         |                                                                                                          |           |         |          |
|-----------|---------|----------------------------------------------------------------------------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                                                                                              | DATE      | INITIAL | APPROVED |
| C         |         | UPDATE TO NEW DRAFTING STANDARD                                                                          | 4/16/2012 | JAG     |          |
| 2         | 16-0039 | RBD3330-041-3 CH'D DIM WAS 7.11 IS (7.11), WAS .10 IS (2X .09), WAS .087 IS 2X .082, WAS 3.505 IS 3.500. | 2/11/2016 | SM      | JAG      |

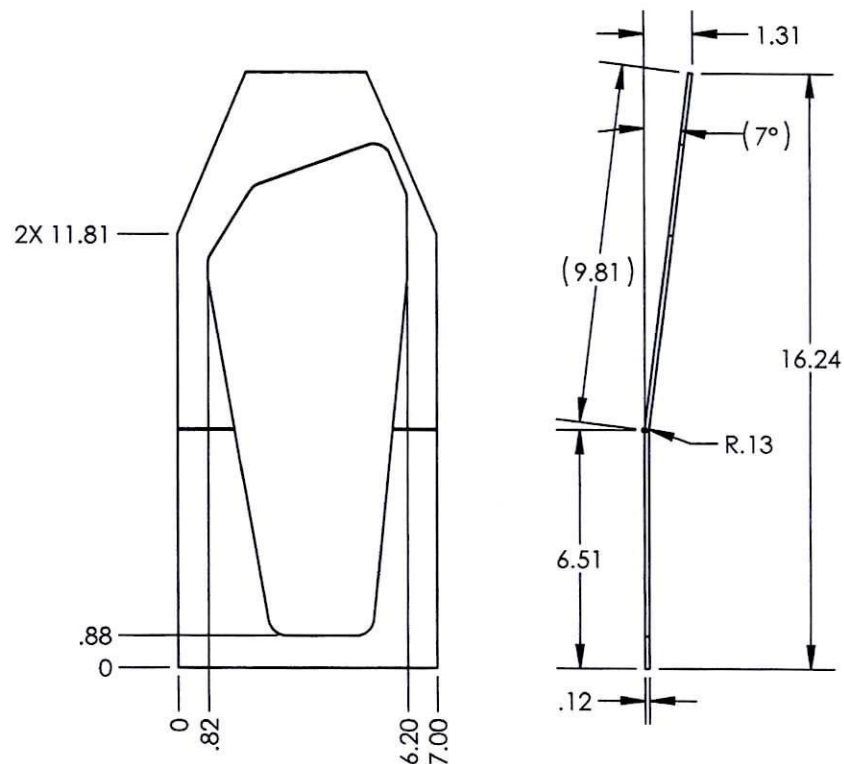
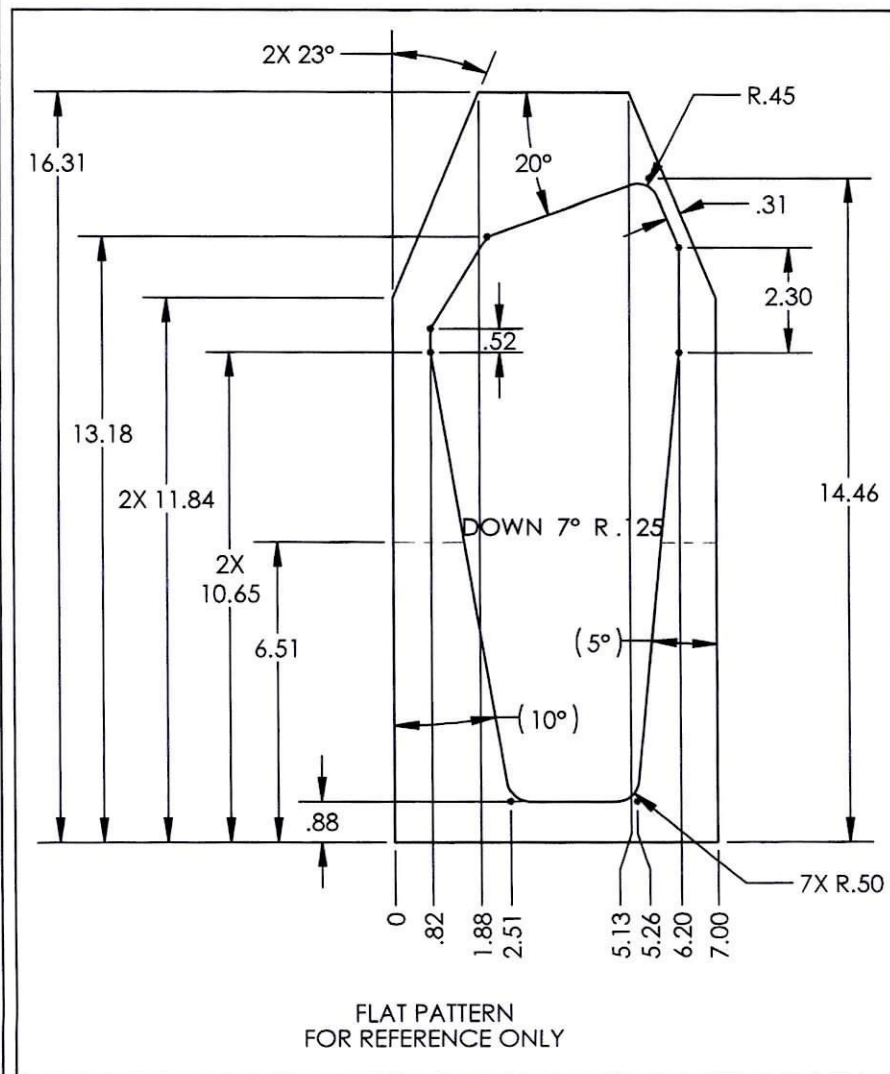


RBD3330-041-3  
PLATE

|                                            |                              |
|--------------------------------------------|------------------------------|
| <b>DART<br/>AEROSPACE</b>                  |                              |
| TITLE<br><b>GROUND HANDLING WHEELS</b>     |                              |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-3 | REV<br><b>2</b>              |
| MAT'L 1018/1020 CR                         | UNLESS OTHERWISE SPECIFIED   |
| TREAT                                      | DIMENSIONS ARE IN INCHES     |
| FINISH SEE FRAME WELDMENT                  | .XXX ± .010 FRACTIONS ± 1/8  |
| SPEC                                       | .XX ± .03 ANGLES ± 1°        |
|                                            | .X ± .1 SURFACES = 125/      |
| DRAWN BY: GILBERT                          | 1. BREAK ALL SHARP EDGES     |
| CHECKED: CLOUGH                            | .015 x 45° OR .015R          |
| OPPS APPR: ANDERSON                        | 2. DIMENSIONAL LIMITS APPLY  |
| QA APPR: LINDSAY                           | AFTER PLATING                |
| APPROVED: GILBERT                          | 3. INTERPRET DIM AND TOL PER |
|                                            | ASME Y14.5M-2009             |
| SCALE 1:4                                  | USED ON MODEL                |
| DATE 3/16/2012                             | SEE NOTE 2 ON SHT 1          |
|                                            | SHEET 4 OF 12                |

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| REVISIONS |         |                                                                                                            |           |         |          |
|-----------|---------|------------------------------------------------------------------------------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                                                                                                | DATE      | INITIAL | APPROVED |
| C         |         | UPDATE TO NEW DRAFTING STANDARD                                                                            | 4/16/2012 | JAG     |          |
| 1         |         | RBD3330-041-5 ADDED MISSING DIM (.12), CH'D DIM WAS (16.24) IS 16.24.                                      | 6/18/2014 | DPD     | GE       |
| 2         | 16-0039 | RBD3330-041-5 CH'D DIM WAS 9.81 IS (9.81), WAS 7° IS (7°), WAS 5° IS (5°), WAS 10° IS (10°), REMOVED 9.82. | 2/11/2016 | SM      | JAG      |



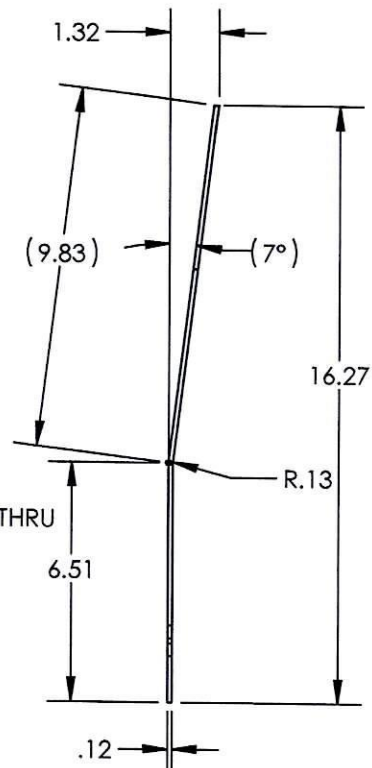
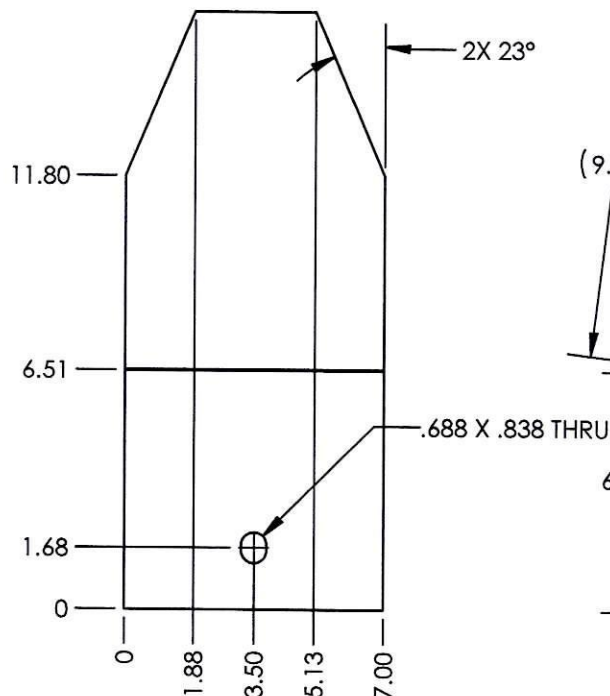
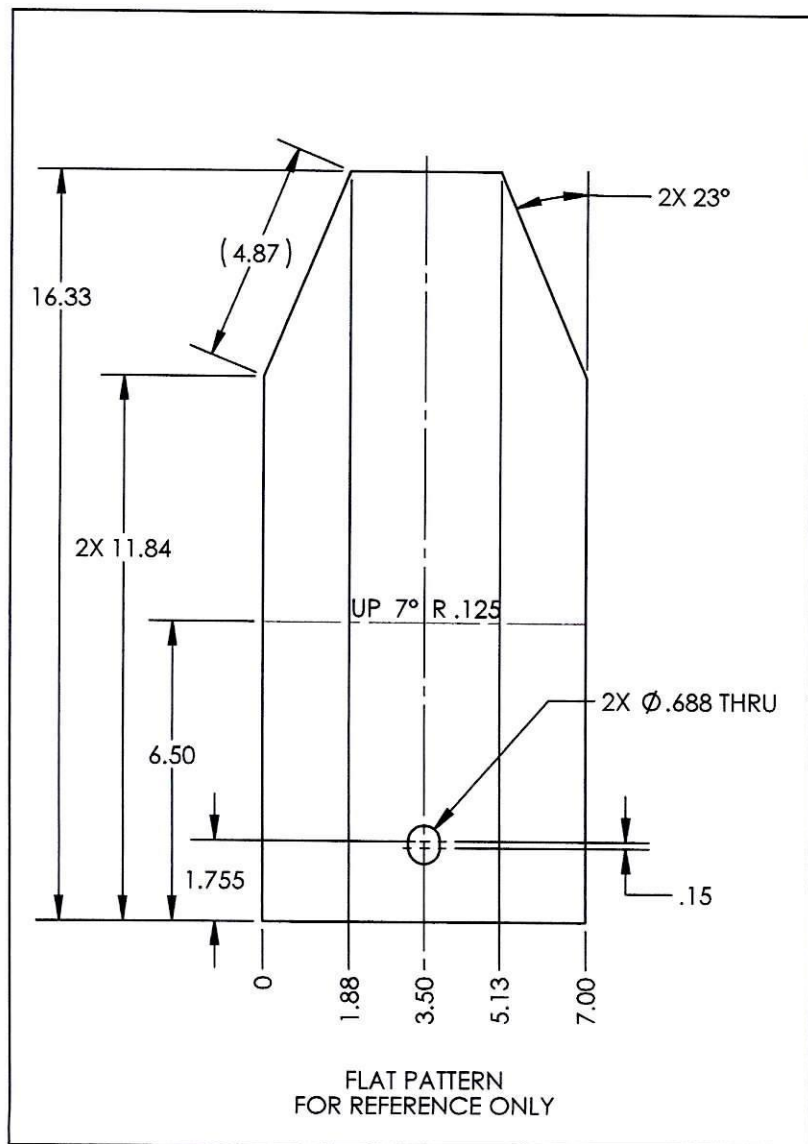
|                                            |                                                        |
|--------------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                  |                                                        |
| TITLE<br><b>GROUND HANDLING WHEEL</b>      |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-5 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                         | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                                 | .XXX ± .010 FRACTIONS ± 1/8                            |
| FINISH SEE FRAME WELDMENT                  | .XX ± .03 ANGLES ± 1°                                  |
| SPEC                                       | .X ± .1 SURFACES = 125/✓                               |
| DRAWN BY: GILBERT                          | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED: CLOUGH                            | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR: ANDERSON                        | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR: LINDSAY                           | USED ON MODEL                                          |
| APPROVED: GILBERT                          |                                                        |
| SCALE 1:5                                  | DATE 3/16/2012                                         |
| SHEET 5 OF 12                              |                                                        |

RBD3330-041-5  
PLATE, FRONT



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| REVISIONS |         |                                                                              |           |         |          |
|-----------|---------|------------------------------------------------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                                                                  | DATE      | INITIAL | APPROVED |
| C         |         | UPDATE TO NEW DRAFTING STANDARD                                              | 4/16/2012 | JAG     |          |
| 1         |         | RBD3330-041-7 ADDED MISSING DIM (.12).                                       | 6/18/2014 | DPD     | GE       |
| 2         | 16-0039 | RBD3330-041-7 CH'D DIM WAS 9.83 IS (9.83), WAS 7° IS (7°), WAS 3.49 IS 3.50. | 2/11/2016 | SM      | JAG      |



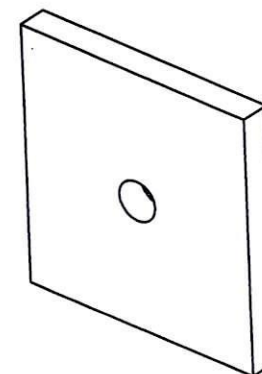
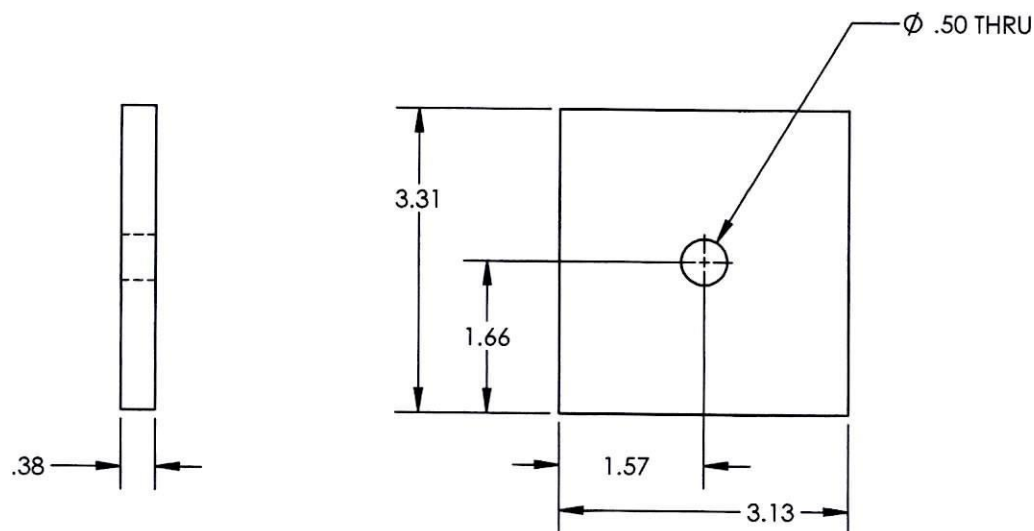
|                                                                                                                                                     |                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>DART<br/>AEROSPACE</b>                                                                                                                           |                |
| TITLE<br><b>GROUND HANDLING WHEEL</b>                                                                                                               |                |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-7                                                                                                          | REV            |
| MAT'L 1018/1020 CR<br>HEAT TREAT<br>FINISH SEE FRAME WELDMENT<br>SPEC                                                                               |                |
| DRAWN BY: GILBERT<br>CHECKED: CLOUGH<br>OPPTS APPR: ANDERSON<br>QA APPR: LINDSAY<br>APPROVED: GILBERT                                               |                |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .010 FRACTIONS ± 1/8<br>.XX ± .03 ANGLES ± 1°<br>.X ± .1 SURFACES = 125/           |                |
| 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R<br>2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING<br>3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009 |                |
| USED ON MODEL                                                                                                                                       |                |
| SCALE 1:5                                                                                                                                           | DATE 3/16/2012 |
| SHEET 6 OF 12                                                                                                                                       |                |

RBD3330-041-7  
PLATE, REAR



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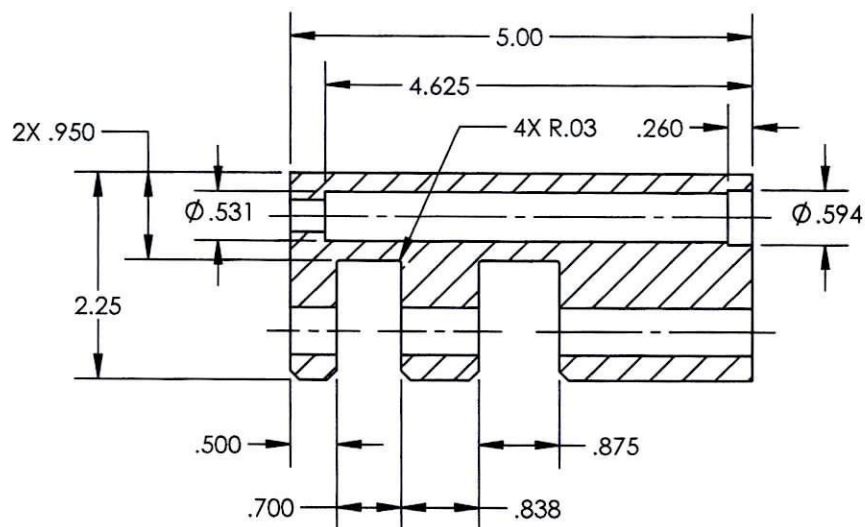
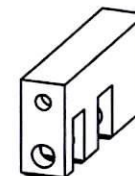
| REVISIONS |     |                                 |           |         |          |
|-----------|-----|---------------------------------|-----------|---------|----------|
| REV       | ECR | DESCRIPTION                     | DATE      | INITIAL | APPROVED |
| C         |     | UPDATE TO NEW DRAFTING STANDARD | 2/11/2016 | JAG     |          |



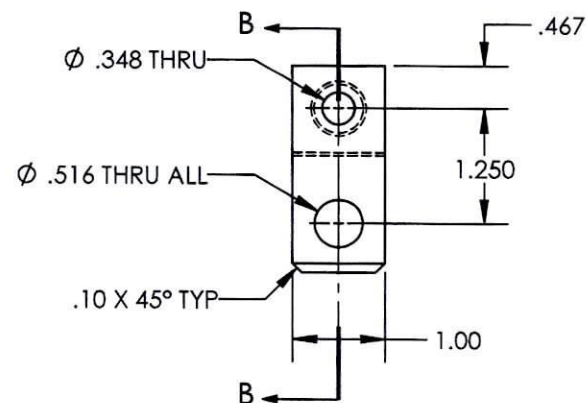
RBD3330-041-9  
TOP PLATE

|                                            |                                                        |
|--------------------------------------------|--------------------------------------------------------|
| <b>DART</b><br>AEROSPACE                   |                                                        |
| TITLE<br><b>GROUND HANDLING WHEEL</b>      |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-9 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                         | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                                 | .XXX ± .010 FRACTIONS ± 1/8                            |
| FINISH SEE FRAME WELDMENT                  | .XX ± .03 ANGLES ± 1°                                  |
| SPEC                                       | .X ± .1 SURFACES = 125/                                |
| DRAWN BY: GILBERT                          | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED: CLOUGH                            | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR: ANDERSON                        | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR: LINDSAY                           | USED ON MODEL                                          |
| APPROVED: GILBERT                          | SEE NOTE 2 SHT 1                                       |
| SCALE 1:2                                  | DATE 3/16/2012 SHEET 7 OF 12                           |

| REVISIONS |     |                                                    |           |         |          |
|-----------|-----|----------------------------------------------------|-----------|---------|----------|
| REV       | ECR | DESCRIPTION                                        | DATE      | INITIAL | APPROVED |
| C         |     | UPDATE TO NEW DRAFTING STANDARDS                   | 4/16/2012 | JAG     |          |
| 1         |     | <b>RBD3330-041-11</b> CH'D DIM WAS 1.00 IS (1.00). | 6/18/2014 | DPD     | GE       |



SECTION B-B



RBD3330-041-11  
LONG PIN BRACKET



TITLE GROUND HANDLING WHEEL

|         |                                  |
|---------|----------------------------------|
| DWG NO. | RBD412-729-011<br>RBD3330-041-11 |
|---------|----------------------------------|

RE

MATL 1018/1020 CR

## HEAT TREAT

TREAT  
FINISH SEE FRAME WELDMENT

|      |                    |
|------|--------------------|
| SPEC | SEE TABLE WELDMENT |
|------|--------------------|

|           |         |
|-----------|---------|
| DRAWN BY: | GILBERT |
|-----------|---------|

|           |         |
|-----------|---------|
| DRAWN BY: | GILBERT |
| CHECKED:  | CLONIC  |

|            |          |
|------------|----------|
| CHECKED:   | CLOUGH   |
| OPPS APPR: | ANDERSON |

|            |          |
|------------|----------|
| OPPS APPR: | ANDERSON |
| QA APPR:   | LINDSAY  |

|           |         |
|-----------|---------|
| QA APPR:  | LINDSAY |
| APPROVED: | CHIEF   |

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES  
XX ± .005 FRACTIONS ± 1/8

$\Delta X \pm .005$       FRACTIONS  $\pm 1/8$   
 $X \pm .01$           ANGLES  $\pm 5^\circ$

$\pm .1$  SURFACES = 125

**BREAK ALL SHARP EDGES**   
015 x 45° OR 015R

DIMENSIONAL LIMITS APPLY

**AFTER PLATING**  
**INTERPRET DIM AND TOL PER**

INTERPRET DIM AND TOL PER  
ASME Y14.5M-2009

USED ON MODEL

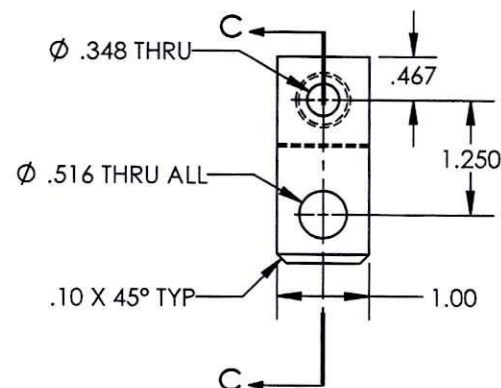
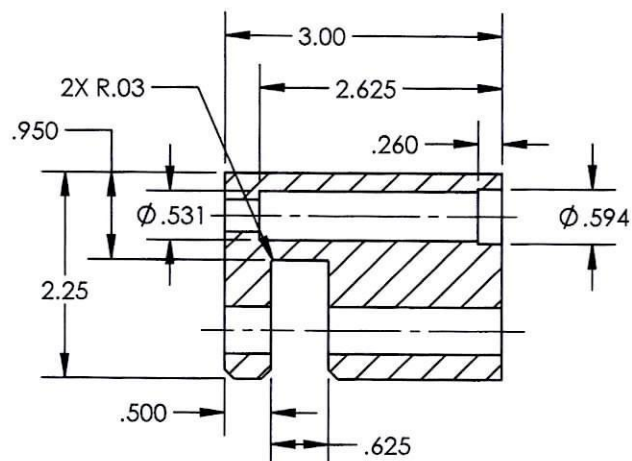
SEE NOTE 2 SHT 1

|       |     |      |           |               |
|-------|-----|------|-----------|---------------|
| SCALE | 1:2 | DATE | 3/16/2012 | SHEET 8 OF 12 |
|-------|-----|------|-----------|---------------|

|     |           |               |
|-----|-----------|---------------|
| 1.2 | 3/16/2012 | SHEET 8 OF 12 |
|-----|-----------|---------------|

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| REVISIONS |     |                                             |           |         |          |
|-----------|-----|---------------------------------------------|-----------|---------|----------|
| REV       | ECR | DESCRIPTION                                 | DATE      | INITIAL | APPROVED |
| C         |     | UPDATE TO NEW DRAFTING STANDARD             | 4/16/2012 | JAG     |          |
| 1         |     | RBD3330-041-13 CH'D DIM WAS 1.00 IS [1.00]. | 6/18/2014 | DPD     | GE       |

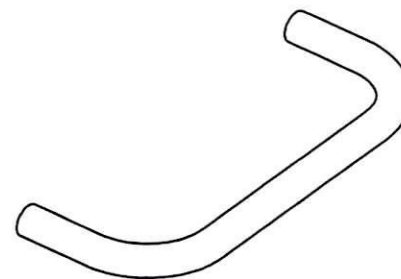
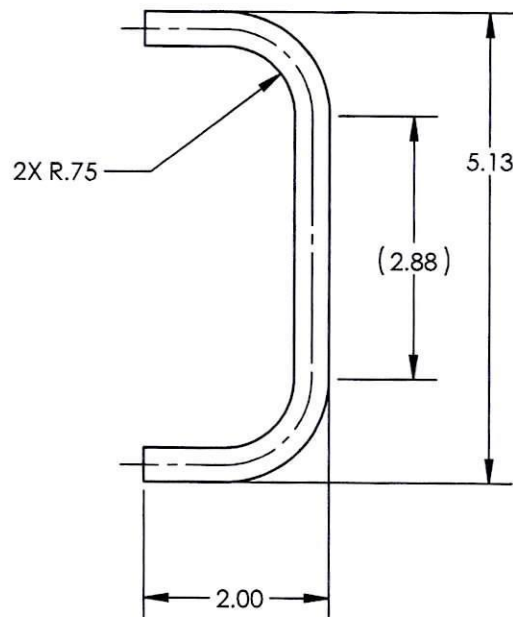
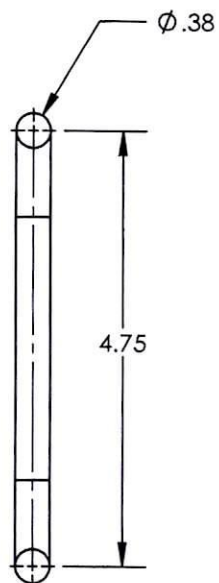


RBD3330-041-13  
SHORT PIN BRACKET

|                                             |                                                        |
|---------------------------------------------|--------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                   |                                                        |
| TITLE<br><b>GROUND HANDLING WHEELS</b>      |                                                        |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-13 | REV<br><b>2</b>                                        |
| MAT'L 1018/1020 CR                          | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES |
| HEAT TREAT                                  | .XXX ± .005 FRACTIONS ± 1/8                            |
| FINISH SEE FRAME WELDMENT                   | .XX ± .01 ANGLES ± 5°                                  |
| SPEC                                        | .X ± .1 SURFACES = 125/✓                               |
| DRAWN BY: GILBERT                           | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R        |
| CHECKED: CLOUGH                             | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING           |
| OPPS APPR: ANDERSON                         | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009       |
| QA APPR: LINDSAY                            | USED ON MODEL                                          |
| APPROVED: GILBERT                           | SEE NOTE 2 SHT 1                                       |
| SCALE 1:2                                   | DATE 3/16/2016 SHEET 9 OF 12                           |

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| REVISIONS |         |                                             |           |         |          |
|-----------|---------|---------------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                                 | DATE      | INITIAL | APPROVED |
| C         |         | UPDATE TO NEW DRAFTING STANDARD             | 4/16/2012 | JAG     |          |
| 1         |         | RBD3330-041-15 CH'D DIM WAS Ø.38 IS (Ø.38). | 6/18/2014 | DPD     | GE       |
| 2         | 16-0039 | RBD3330-041-15 CH'D DIM WAS (Ø.38) TO Ø.38. | 2/11/2016 | SM      | JAG      |



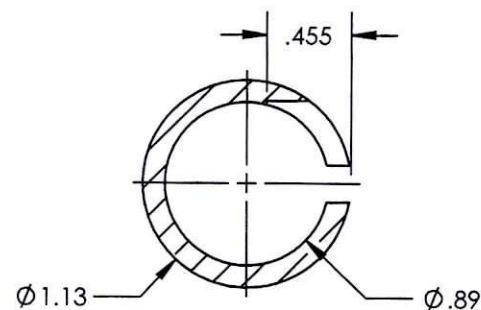
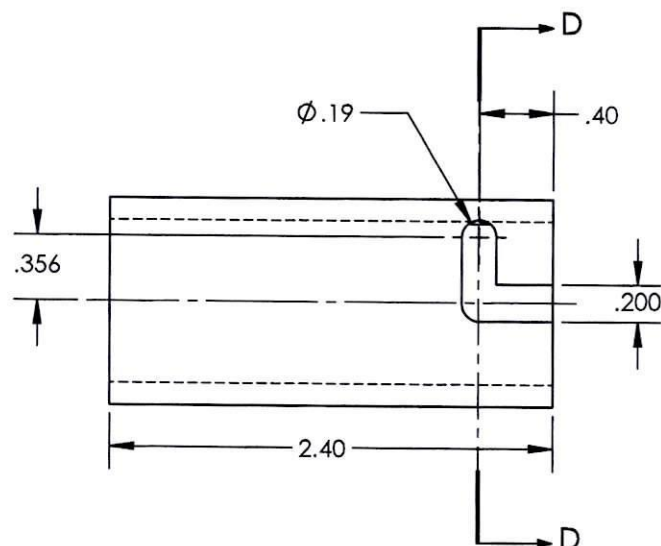
RBD3330-041-15  
HANDLE

|                                                                                                      |                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                                                                            |                                                                                                                                                     |
| TITLE<br><b>GROUND HANDLING WHEELS</b>                                                               |                                                                                                                                                     |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-15                                                          | REV<br><b>2</b>                                                                                                                                     |
| MAT'L 1018/1020 CR<br>HEAT TREAT<br>FINISH SEE FRAME WELDMENT<br>SPEC                                | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .010 FRACTIONS ± 1/8<br>.XX ± .03 ANGLES ± 1°<br>.X ± .1 SURFACES = 125/           |
| DRAWN BY: GILBERT<br>CHECKED: CLOUGH<br>OPPS APPR: ANDERSON<br>QA APPR: LINDSAY<br>APPROVED: GILBERT | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R<br>2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING<br>3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009 |
| SCALE 1:2                                                                                            | DATE 3/16/2012                                                                                                                                      |
| SHEET 10 OF 12                                                                                       |                                                                                                                                                     |

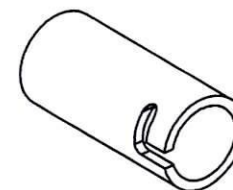


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| REVISIONS |         |                                                                                              |           |         |
|-----------|---------|----------------------------------------------------------------------------------------------|-----------|---------|
| REV       | ECR     | DESCRIPTION                                                                                  | DATE      | INITIAL |
| C         |         | UPDATE TO NEW DRAFTING STANDARD                                                              | 4/16/2012 | JAG     |
| 1         |         | RBD3330-041-17 CH'D DIMS WAS Ø1.13 IS (Ø1.13), WAS Ø.89 IS (Ø.89).                           | 6/18/2014 | DPD     |
| 2         | 16-0039 | RBD3330-041-17 CH'D DIM WAS (Ø1.13) IS Ø1.13, WAS (Ø.89) IS Ø.89. CH'D MATL WAS DOM IS HREW. | 2/11/2016 | SM      |



SECTION D-D

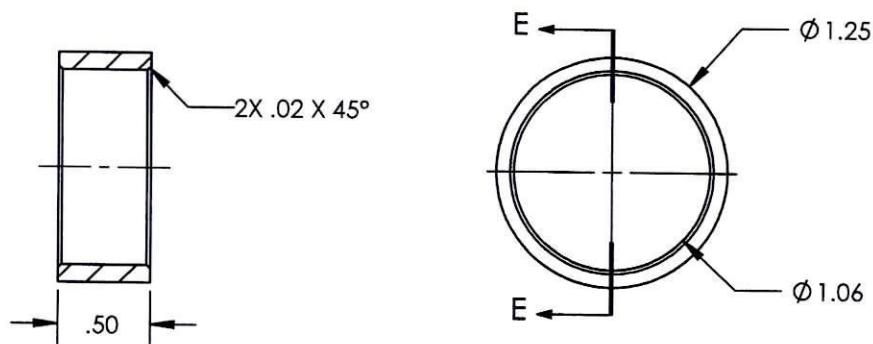
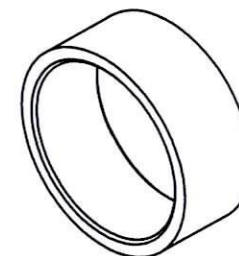


RBD3330-041-17  
HANDLE RIM

|                                                                 |                                                                                                                                           |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                                       |                                                                                                                                           |
| TITLE<br><b>GROUND HANDLING WHEEL</b>                           |                                                                                                                                           |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-17                     | REV<br><b>2</b>                                                                                                                           |
| MATL HREW<br>HEAT<br>TREAT<br>FINISH SEE FRAME WELDMENT<br>SPEC | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± 5°<br>.X ± .1 SURFACES = 125/ |
| DRAWN BY: GILBERT                                               | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R                                                                                           |
| CHECKED: CLOUGH                                                 | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING                                                                                              |
| OPPS APPR: ANDERSON                                             | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009                                                                                          |
| QA APPR: LINDSAY                                                | USED ON MODEL                                                                                                                             |
| APPROVED: GILBERT                                               | SEE NOTE 2 SHT 1                                                                                                                          |
| SCALE 1:1                                                       | DATE 3/16/2012                                                                                                                            |
| SHEET 11 OF 12                                                  |                                                                                                                                           |

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| REVISIONS |         |                                                                          |           |         |          |
|-----------|---------|--------------------------------------------------------------------------|-----------|---------|----------|
| REV       | ECR     | DESCRIPTION                                                              | DATE      | INITIAL | APPROVED |
| C         |         | UPDATE TO NEW DRAFTING STANDARD                                          | 4/16/2012 | JAG     |          |
| 1         |         | RBD3330-041-19 CH'D DIMS WAS Ø1.31 IS (Ø1.25). WAS Ø1.075 IS Ø1.06.      | 6/18/2014 | DPD     | GE       |
| 2         | 16-0039 | RBD3330-041-19 CH'D DIM WAS (Ø1.25) IS 1.25. CH'D MAT'L WAS DOM IS HREW. | 2/11/2016 | SM      | JAG      |



SECTION E-E

RBD3330-041-19  
HANDLE ARM

|                                                               |                                                                                                                                            |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DART<br/>AEROSPACE</b>                                     |                                                                                                                                            |
| TITLE<br><b>GROUND HANDLING WHEEL</b>                         |                                                                                                                                            |
| DWG NO.<br>RBD412-729-011<br>RBD3330-041-19                   | REV<br><b>2</b>                                                                                                                            |
| MAT'L HREW<br>HEAT TREAT<br>FINISH SEE FRAME WELDMENT<br>SPEC | UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>.XXX ± .005 FRACTIONS ± 1/8<br>.XX ± .01 ANGLES ± .5°<br>.X ± .1 SURFACES = 125° |
| DRAWN BY: GILBERT                                             | 1. BREAK ALL SHARP EDGES<br>.015 x 45° OR .015R                                                                                            |
| CHECKED: CLOUGH                                               | 2. DIMENSIONAL LIMITS APPLY<br>AFTER PLATING                                                                                               |
| OPPS APPR: ANDERSON                                           | 3. INTERPRET DIM AND TOL PER<br>ASME Y14.5M-2009                                                                                           |
| QA APPR: LINDSAY                                              | USED ON MODEL                                                                                                                              |
| APPROVED: GILBERT                                             | SEE NOTE 2 SHT 1                                                                                                                           |
| SCALE 1:1                                                     | DATE 3/16/2012 SHEET 12 OF 12                                                                                                              |



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER PO36956

**Supplier:** MEM001-VC  
Metec Metal Technology Inc.  
20 Terry Fox Drive PO Box 781  
Vankleek Hill  
ON  
K0B 1R0 Canada  
Phone: 613 678 3957  
Fax: 613 678 3956

**PO No:** PO36956  
**PO Date:** 7/7/17  
**Due Date:** 2/1/18  
**Purchase Order  
Revision:**  
**Revision Date:**  
**Ship-To Contact:** Phone:

REVISED

**Pymt Terms:** net 30  
**Freight Terms:**  
**Special Comments:**

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

## Items

| Line Item                   | Part            | Supplier Part No | Description                                                                              | Status | Due Date | Order Quantity | Received Quantity | Balance | Unit Price (CAD) | Extended Price |
|-----------------------------|-----------------|------------------|------------------------------------------------------------------------------------------|--------|----------|----------------|-------------------|---------|------------------|----------------|
| 2                           | RBD412-729-041P |                  | Ground Handling Wheels Fits LH or RH (Hydraulic) DWG REV 2<br>receive pcs<br>receive pcs | Firmed | 2/1/18   | 1 Ea           | 0 Ea              | 1 Ea    | \$4,582.00/Ea    | \$4,582.00     |
| Line Item Note JOB 171424 - |                 |                  |                                                                                          |        |          |                |                   |         |                  |                |
| 3                           | RBD412-729-041P |                  | Ground Handling Wheels Fits LH or RH (Hydraulic) DWG REV 2<br>receive pcs<br>receive pcs | Firmed | 2/1/18   | 1 Ea           | 0 Ea              | 1 Ea    | \$4,582.00/Ea    | \$4,582.00     |
| Line Item Note JOB 171423 - |                 |                  |                                                                                          |        |          |                |                   |         |                  |                |
| Grand Total:                |                 |                  |                                                                                          |        |          |                |                   |         |                  | \$9,164.00     |

## Order Notes

Procurement Quality Clauses  
A005 RIGHT OF ENTRY  
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)  
A012 CHEMICAL AND PHYSICAL TEST REPORTS  
A016 PERSONNEL QUALIFICATION  
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)  
A026 CERTIFICATION OF MATERIAL CONFORMANCE  
A041 QUALITY MANAGEMENT SYSTEM  
A042 DART NOTIFICATION BY SUPPLIER  
A043 RETENTION OF QUALITY DOCUMENT  
  
A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM  
A049 SUPPLIER AWARENESS

CX

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.





Dart Hawkesbury  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER PO36956

**Supplier:** MEM001-VC  
Metec Metal Technology Inc.  
20 Terry Fox Drive PO Box 781  
Vankleek Hill  
ON  
K0B 1R0 Canada  
Phone: 613 678 3957  
Fax: 613 678 3956

**PO No:** PO36956  
**PO Date:** 7/7/17  
**Due Date:** 10/20/17  
**Purchase Order  
Revision:**  
**Revision Date:**  
**Ship-To Contact:** Phone:

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Pymt Terms:** net 30  
**Freight Terms:**  
**Special Comments:**

## Items

| Line<br>Item | Part                | Rev | Description                                                                                    | Item Tax | Status | Due<br>Date | Order<br>Quantity | Received<br>Quantity | Balance | Unit<br>Price (CAD) | Extended<br>Price |
|--------------|---------------------|-----|------------------------------------------------------------------------------------------------|----------|--------|-------------|-------------------|----------------------|---------|---------------------|-------------------|
| 1            | RBD412-<br>729-041P | -   | Ground Handling Wheels<br>Fits LH or RH (Hydraulic)<br>DWG REV 2<br>receive pcs<br>receive pcs |          | Firmed | 10/13/17    | 1 Ea              | 0 Ea                 | 1 Ea    | \$4,582.00/Ea       | \$4,582.00        |
| 2            | RBD412-<br>729-041P | -   | Ground Handling Wheels<br>Fits LH or RH (Hydraulic)<br>DWG REV 2<br>receive pcs<br>receive pcs |          | Firmed | 10/13/17    | 1 Ea              | 0 Ea                 | 1 Ea    | \$4,582.00/Ea       | \$4,582.00        |
| 3            | RBD412-<br>729-041P | -   | Ground Handling Wheels<br>Fits LH or RH (Hydraulic)<br>DWG REV 2<br>receive pcs<br>receive pcs |          | Firmed | 10/13/17    | 1 Ea              | 0 Ea                 | 1 Ea    | \$4,582.00/Ea       | \$4,582.00        |

**Grand Total: \$13,746.00**

## Order Notes

DWG REV 2

DWG REV 2

DWG REV 2

### Procurement Quality Clauses

A005 RIGHT OF ENTRY  
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)  
A012 CHEMICAL AND PHYSICAL TEST REPORTS  
A016 PERSONNEL QUALIFICATION  
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)  
A026 CERTIFICATION OF MATERIAL CONFORMANCE  
A041 QUALITY MANAGEMENT SYSTEM  
A042 DART NOTIFICATION BY SUPPLIER  
A043 RETENTION OF QUALITY DOCUMENT

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit  
[www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.





20 Terry Fox Drive  
 Vankleek Hill, Ontario K0B 1R0 , Canada  
 Tel: (613) 678-3957  
 Fax: (613) 678-3956

**Delivery Slip No.:** 21945  
**Date:** Jan 29, 2018  
**Page:** 1

|                                                                                                         |                                                                                                 |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Sold to:</b>                                                                                         | <b>Ship to:</b>                                                                                 |
| <b>Dart Aerospace Ltd.</b><br>Att. Linda Lacelle<br>1270 Aberdeen Street<br>Hawkesbury, Ontario K6A 1K7 | Dart Aerospace Ltd.<br>Att. Robert Aboud<br>1270 Aberdeen Street<br>Hawkesbury, Ontario K6A 1K7 |
| <b>Order No.:</b> 36956                                                                                 | <b>Sold By:</b> Walz, Christian D.                                                              |
| <b>Shipped By:</b> your truck                                                                           | <b>Ship Date:</b> Jan 29, 2018                                                                  |

| Description                                                                                                                                                                                            | Bin Loc | Unit  | Quantity ordered          | Quantity shipped | Quantity on B/O |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|---------------------------|------------------|-----------------|
| RBD412-729-011 RBD3330-041 & RBD3233-041 Ground Handling Wheel as per drawings Rev.2                                                                                                                   |         | Set/2 | 1                         |                  |                 |
| RBD412-729-011 RBD3330-041 & RBD3233-041 Ground Handling Wheel as per drawings Rev.2                                                                                                                   |         | Set/2 | 1                         | 1                |                 |
| RBD412-729-011 RBD3330-041 & RBD3233-041 Ground Handling Wheel as per drawings Rev.2                                                                                                                   |         | Set/2 | 1                         | 1                |                 |
| Material, machining, welding, finishing and assembly included not included are the following:<br>RB 41001 Dart Placard<br>Crate (no part #) 44" x 24" x 24" ISPM 15 certified                          |         |       |                           |                  |                 |
| The delivered goods must be inspected upon receipt to confirm compliance.<br>Should there be discrepancies please notify METEC within 30 days of delivery.<br>The goods are otherwise deemed accepted. |         |       |                           |                  |                 |
| Received by _____                                                                                                                                                                                      |         |       | Thank you for your order! |                  |                 |



20 Terry Fox Drive, Vankleek Hill, Ontario K0B 1R0  
Tel. (613) 678-3957 & (613) 678-2782 Fax (613) 678-3956 [metec@metec.ca](mailto:metec@metec.ca)

---

## CERTIFICATE OF CONFORMITY

SOLD TO:

Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, Ont.  
K6A 1K7

SHIPPED TO:

same

| Quantity | Part Number    | Part Name             | P.O. Number |
|----------|----------------|-----------------------|-------------|
| 1 set    | RBD412-729-011 | Ground Handling Wheel | 36956       |
| 1 set    | RBD412-729-011 | Ground Handling Wheel | 36956       |

MATERIAL: supplied by METEC

We hereby certify that the above parts were made in conformance with applicable drawings.

*METEC Metal Technology Inc.*

A handwritten signature in black ink, appearing to read "Jan Norris", is written over a faint, larger signature.

Jan Norris

Vankleek Hill, January 29, 2018